

THE IAS GAZETTE

A House Journal of **APTI PLUS**

OCTOBER 2020



APTI PLUS

Academy For Civil Services Pvt. Ltd.
Eastern India's Best IAS Academy since 2006
An ISO 9001:2008 Certified Institute
Creating Civil Servants for the Nation



TH EDITION

**BLUE FLAG
BEACHES
BEAMS**



**INDIA-JAPAN
RELATIONS**



**WORLD'S
LARGEST
SOLAR
TREE**

OCTOBER 2020

THE IAS GAZETTE

A House Journal of **APTI PLUS**

Sources

The Hindu | The Indian Express
Live mint | The Economic Times
PIB | PRS | ET
Government & World Reports
(NITI Aayog, Budget, WEF
Economic Survey etc.)
Hindu Business Line | NCERTs
All standard reference books

HEAD OFFICE & KOLKATA CAMPUS

Office no. 803, "AMP Mall Vaisaakkhi"
8th floor, Salt Lake Sector – II,
Salt Lake City - AG 112, Kolkata-700091
Ph: +91-8820341777

BHUBANESHWAR CAMPUS

Plot No. 2280, Biju Pattanaik
College Road, Jaydev Vihar,
Bhubaneswar, Odisha-751013
Phone: 099383 86166

ELGIN ROAD

Elgin Chambers, 3rd Floor, Room No. 302,
1A, Ashutosh Mukherjee Road, Kolkata-20
mail: apti.plus@gmail.com,
Ph: (033)-40645777, +91-8100765577

E-mail

apti.plus@gmail.com
theiasgazette@gmail.com
Website: <http://www.aptiplus.in>



CONTENTS

GS-I

1-8

HARIJAN SEVAK SANGH FOUNDATION DAY	1
HERITAGE TOURISM POLICY	2
RENATI CHOLA ERA INSCRIPTION	2
HAMPI	3
DHRUPAD	4
PATRIKA GATE	4
ROGAN ART	5
PUNNAPRA-VAYALAR UPRISING	6
PROMOTION OF BUDDHIST SITES	7
KAKATIYA DYNASTY	8

GS-II

9-38

QUESTION HOUR	9
TWO YEARS FIXED TENURE FOR HOUSE COMMITTEES	10
DY. SPEAKER	10
CRIMINALISATION OF POLITICS	11
LAW PANEL ON VIRTUAL COURTS	12
TIMELINE FOR CANDIDATES	13
SINGAPORE CONVENTION ON MEDIATION	14
EMENY PROPERTIES	15
OFFICE OF PROFIT	15
NCISM BILL, 2020	16
MISSION KARMAYOGI	17
ANNUAL NCRB REPORT 2019	18
FCRA	19
SAME-SEX UNIONS	20
LABOR CODES	21
LANGUAGE OF THE LAW	23
ASPIRATIONAL DISTRICT PROGRAMME	24
ISSUE OF BEGGARY	25
INDO-PACIFIC CLUB	26
FIVE POINT PLAN TO DE-ESCALATE LAC STAND-OFF	26
INDIA-BANGLADESH INLAND WATERWAYS	27



Disclaimer:
The views and opinions expressed in this Journal are of the authors' and do not necessarily reflect the views of the Government or the organization they work for.

Arise, awake and stop not till the goal is reached.

- Swami Vivekananda



CONTENTS

GS-II

9-38

SUPPLY CHAINS RESILIENCE	28
INDIA-JAPAN RELATIONS	29
THE 13TH AMENDMENT (SRI LANKA)	33
INDUS WATER TREATY (IWT)	35
ARMENIA-AZERBAIJAN CONFLICT	37

GS-III

39-81

EASING OF LIQUIDITY	39
DECREASE IN GDP	39
FISCAL DEFICIT	41
STATE EASE OF DOING BUSINESS	41
STARTUP RANKING EXERCISE	43
DIVERSION OF CESS OF GST	43
FARM BILLS	45
BHARATNET	46
FISHERY SECTOR	48
MINIMUM SUPPORT PRICE	50
WORLD'S LARGEST SOLAR TREE	52
BRAIN ATLAS	53
NIBEC	54
INDIA JOINS HYPERSONIC MISSILE CLUB	55
MERGER OF BLACK HOLES	58
SOLAR CYCLE 25	60
GIANT RADIO GALAXIES	61
DATA SONIFICATION PROJECT	62
METHANE HYDRATE	63
GLOBAL INNOVATION INDEX 2020	64
NIDHI PROGRAMME	65
HCNG	66
MOON MAY BE RUSTING	66
AAREY FOREST LAND	68
CSCAF 2.0	68
LAND DEGRADATION AND CORAL REEF PROGRAM	70
BLUE FLAG BEACHES BEAMS	71
AIR QUALITY IN DELHI NCR	73
SANDALWOOD SPIKE DISEASE (SSD)	74
WHALE MASS STRANDINGS	74
CAMPAIGN TO REMOVE LANTANA: RAJASTHAN	75
EARLY MIGRATION OF BUTTERFLIES	76
ASSAM RIFLES	78
Y PLUS CRPF SECURITY COVER	79
SPECIAL FRONTIER FORCE (SFF)	79
DEFENCE ACQUISITION PROCEDURE - 2020	80

GS-IV

82-83

CODE OF ETHICS FOR NEWS CHANNELS

SHORT NEWS ARTICLES

84-116

VISWANATHA SATYANARAYANA	84
YANOMAMI PEOPLE	84
SARVAPALLI RADHAKRISHNAN	84
K.N. DIKSHIT COMMITTEE	84
ODISHA'S KANDHAMAL HALDI	84
SUBRAMANIAM BHARATI	85
PARLIAMENT OF WORLD RELIGION	85
BHAGAT SINGH (113TH BIRTH ANNIVERSARY)	85
VISHNUPADA TEMPLE	85
CHENDAMANGALAM SAREE	86
CHANNAPATNA TOY	86
CRETE ISLAND	86
CHUSHUL	87
MUNDRA PORT	87
HURRICANE NANA	87
'SWABHIMAN ANCHAL' & GURUPRIYA BRIDGE	87
TYPHOON HAISHEN	87
KRA CANAL	88
NATHU LA	88
NIOGHALVFJERDSFJORDEN GLACIER	89
SHINKUN LA TUNNEL	89
ETOSHA PAN	89
MEDICANE	89
ENGLISH CHANNEL	90
NAGORNO-KARABAKH	90
DURGAM CHERUVU	90
BALTIC STATES	90
KOSI RAIL MAHASETU	91
PRIPYAT RIVER	91
MEKEDATU PROJECT	91
TYPHOON MAYASAK	91
MT EVEREST	92
GLOBAL INNOVATION INDEX	92
SWAMIH INVESTMENT FUND	93
E-GRAM SWARAJ PORTAL	93
VILLAGE POVERTY REDUCTION PLAN	93
"KIRAN" - THE MENTAL HEALTH REHABILITATION HELPLINE	94
NSO REPORT ON DIGITAL DIVIDE	94
HEALTH IN INDIA REPORT BY NSO	95

OCTOBER 2020

THE IAS GAZETTE

A House Journal of **APTI PLUS**



CONTENTS

SHORT NEWS ARTICLES

84-116

GLOBAL MULTIDIMENSIONAL POVERTY INDEX AND INDIA	96
BASIC EXCHANGE AND COOPERATION AGREEMENT	96
US-INDIA STRATEGIC PARTNERSHIP FORUM (USISPF)	97
G-20 LEADERS' SUMMIT ON EDUCATION	97
ASEAN-INDIA PLAN OF ACTION (2021-2025)	98
UN'S COMMISSION ON STATUS OF WOMEN	99
INDIAN TECHNICAL AND ECONOMIC COOPERATION (ITEC) PROGRAMME	99
DJIBOUTI CODE OF CONDUCT/ JEDDAH AMENDMENT (DCOC/JA)	100
SAARC AND CICA MEETINGS	100
SELLING OF G-SECS	102
DOORSTEP BANKING SERVICES AND EASE 2.0 INDEX RESULTS	102
RURAL SELF EMPLOYMENT TRAINING INSTITUTES	103
SAROD-PORTS	103
IRAD APP	104
CENTRALIZED FARM MACHINERY PERFORMANCE TESTING PORTAL	104
HAIYANG-2C	104
CAT QUE VIRUS	105
SCRUB TYPHUS	105
PHOSPHINE GAS IN VENUS	105
HIMALAYAN CHANDRA TELESCOPE	105
BRUCELLOSIS	106
MASS SPECTROMETRY	106
ASTEROID 465824 2010 FR	107
AFRICAN TRYPA NOSOMIASIS	107
REAL MANGO	107
CORTICOSTEROIDS	108
POSTAGE STAMP ON A-SAT	108
GREEN TERM AHEAD MARKET (GTAM)	108
FIRST WORLD SOLAR TECHNOLOGY SUMMIT	109
IEP'S ECOLOGICAL THREAT REGISTER	109
LIVING PLANET REPORT 2020	110
GREATER ONE-HORNED RHINOCEROS	111
AFRICAN ELEPHANT DYING DUE TO CYANOBACTERIA	111
NANDANKANAN ZOOLOGICAL PARK: ODISHA	112
MORPHOLOGICAL PHENOTYPIC PLASTICITY IN KALINGA FROG	112
DISPOSAL OF CIGARETTE BUTTS	112
LOW OZONE OVER BRAHMAPUTRA RIVER VALLEY	112
NET PRESENT VALUE OF FORESTS	113

SHORT NEWS ARTICLES

84-116

INDRA NAVY - 20	113
SWABHIMAN ANCHAL	113
ABHYAS	114
LASER GUIDED ATGM	114
PASSEX	114
JIMEX 2020	115
PROJECT 17A	115
INS VIRAAT	115

MCQs

117-124

Context

- On 30th September 1932, Harijan Sevak Sangh was founded by Gandhiji.
- It was a result of the historic Poona Pact between him and B.R. Ambedkar.

Immediate Historical Background

Communal Award

- After the **Second Round Table Conference** (Dec 1931) British government agreed to give Communal Award to the depressed classes.
- The Communal Award was announced by the British Prime Minister **Ramsay MacDonald** on 16th August 1932 and it **extended separate electorate to depressed Classes and other minorities.**
- Initially, the separate electorate was introduced in Indian council Act 1909 for Muslims and extended to Sikhs, Indian Christians, Anglo-Indians and Europeans by Government of India Act 1919.
- But now the separate electorate was available to the Forward Caste, Muslims, Buddhists, Sikhs, Indian Christians, Anglo-Indians, Europeans and Depressed Classes also.

Poona Pact

- Gandhiji opposed the government's decision. He saw in it a sinister device of the British government to create a split in the Hindu community in furtherance of its policy of divide and rule.
- Subsequently he went on to the indefinite fast in Yerawada Jail.
- He ended his fast only after signing the Poona Pact with Ambedkar at Yerawada Central Jail in Poona.
- It was signed by Ambedkar on behalf of the depressed classes and by **Madan Mohan Malviya** on behalf of the upper caste Hindus.
- It was agreed in the pact that there shall be electoral seats reserved for the Depressed Classes out of general electorate.

Harijan Sevak Sangh

- Thereafter on September 30, Gandhiji founded **All India Anti Untouchability League.**
- It was **later renamed as Harijan Sevak Sangh ("Servants of Untouchables Society")**.
- The Sangh is headquartered in Kingsway Camp, Delhi.
- Industrialist **Ghanshyam Das Birla was its founding president** with Amritlal Takkar was its Secretary.

What was the aim?

- To eradicate untouchability in India & to uplift the Depressed Class of India.

Response and Activities

- A new weekly paper, the Harijan, was started.
- At Shantiniketan, poet Rabindranath Tagore, dressed in black, spoke to a large gathering on the urgency of fighting an age-old evil of untouchability.
- The Sangh helped the depressed classes to access public places such as temples, schools, roads and water resources & also conducted inter dining and inter caste marriages.
- Gandhiji opened a temple to **"untouchables"** at Wardha.
- Schools and Residential Schools were established by the Sangh all over India.
- In 1939, Harijan Sevak Sangh of Tamil Nadu headed by A. Vaidyanatha Iyer entered the Meenakshi Amman Temple in Madurai, with members of depressed class including P. Kakkan despite opposition from the upper caste Hindus.
- The Sangh led by Iyer organised several temple entry movements & opened hundreds of temples in parts of Tamil Nadu.

Significance

- Through Harijan Sevak Sangh Gandhiji attacked "Untouchability" calling it the greatest blot on Hinduism. According to him it is against the Shastras & fundamental principles of humanity.
- Gandhi ji always said, as long as the Hindus wilfully regard untouchability as part of their religion, Swaraj is impossible of attainment.
- He publicly put the 'abolition' of untouchability as the essential prerequisite for India's true independence.

HERITAGE TOURISM POLICY

GS-I INDIAN HERITAGE & CULTURE

Context

- Recently, **Gujarat government** announced its first Heritage Tourism Policy.

Highlights of the Policy

- It allowed opening up of heritage hotels, museums, banquet halls and restaurants **inside historic palaces, forts and buildings.**
- It is applicable to historic structures that existed **before January 1, 1950.**
- Under this policy, a new heritage hotel or an existing one will get financial assistance of Rs 5-10 crore for renovation or expansion. The basic heritage structure should not be altered during this process.
- In next five years, the government will give **100 per cent relief in electricity duty, marketing support and rent assistance in national and international events.**

Significance

- Tourism department pointed out that there are more than 100 heritage properties in Gujarat but only 20 of them have been opened up for tourism.
- A dedicated policy will not only encourage owners to renovate the old structures, but will also help attract foreign tourists to some of the princely states and jagirs once ruled by Maratha Gaekwads, Kathi Durbars, Rajput clans and Muslim dynasties.
- This move will boost tourism and create jobs.

Some Historical places in Gujarat

Kanthkot Fort& Temple	A Jain & Sun temple. Capital of the Kathi people.
Tera fort	Built by Jadejas during the reign of Deshalji I(18th century).
Rani ki Vav, Patan (UNESCO's World Heritage Site)	Built by Udaymati, queen of Solanki Dynasty. Situated on the banks of Saraswati river
Sarkhej Roza Tomb	Prominent centre of Sufi culture. Sufi saint Shaikh Ahmed Ganj Baksh lived here. Built by Sultan Ahmed Shah on the banks of the Sabarmati
Vijaya Vilas Palace	Summer palace of Jadeja Maharao of Kutch. Built during reign of Maharao Shri Khengarji III
Lakshmi Vilas Palace	Styled on the Indo-Saracenic Revival architecture, built by Maharaja Sayajirao Gaekwad III in 1890
Prag Mahal	Built by Rao Pragmalji II (Jadeja dynasty). Indo-Saracenic Revival style
Champaner-Pavagadh, a UNESCO World Heritage Site	Founded by Vanraj Chavda (Chavda Dynasty)
Sun Temple, Modhera	Built during rule of Bhima I of the Chaulukya dynasty. On the bank of the river Pushpavati. Protected under Archaeological Survey of India.

RENATI CHOLA ERA INSCRIPTION

GS-I ANCIENT HISTORY

Context

- A rare inscription dating back to the Renati Chola era has been unearthed in a remote village of Kadapa district of Andhra Pradesh.

Renati Cholas

- Renati Cholas were from one of the Telugu Chola families.
- The Telugu Cholas ruled parts of present-day **Andhra Pradesh between the sixth and the thirteenth century.**
- Telugu Cholas of Renadu (also called as Renati Cholas) ruled over Renadu region between 6th and 8th centuries, in the present day Cuddapah district.

- They were originally independent. But later forced to the suzerainty of the Eastern Chalukyas.
- They used the Telugu language in their inscriptions belonging to the 6th and 8th centuries.
- The earliest ruler of this family was **Nandivarman** (500 AD) who claimed descent from the family of Karikala.
 - ✓ Karikala was a Chola dynasty king who ruled southern India. He is credited with the conquest of the whole of India up to the Himalayas and the construction of the flood banks of the river Kaveri. He is recognised as the greatest of the Early Cholas.

Renati Chola Inscription

- Found engraved on a dolomite slab and shale.
- The inscription was written in **archaic Telugu**.
- It was assigned to the 8th Century A.D., when the region was under the rule of Chola Maharaja of Renadu.
- The inscription throws light on the record of a gift of six **Marttus (a measuring unit) of land gifted to a person Sidyamayu, one of the Brahmins** serving the temple.

Dynasties related to Cholas: Telugu Chodas of Andhra; Chodagangas of Kalinga; Nidugal Cholas of Karnataka; Rajahnate of Cebu.

Note: Read about Chola Dynasty from Ancient History Book in detail.

HAMPI

GS-I MEDIEVAL HISTORY

Context

- Recently, The Ministry of Tourism organised their latest webinar titled **Hampi- Inspired by the past; Going into the future** under **Dekho Apna Desh Webinar series**.

Hampi	UNESCO World Heritage Site in Karnataka
Capital of	Vijayanagar Empire (14th century)
Location	On the banks of Tungabhadra River
Prosperity	World's second-largest medieval-era city after Beijing,
In ruins	1600 surviving remains
Vitthala Temple in Hampi	Built by Devaraya II. Dedicated to Lord Vishnu.
Achyutaraya temple Complex in Hampi	Dedicated to Vishnu. Other name: Tiruvengalanatha temple
Pattabhirama temple complex	Dedicated to Rama.
Virupaksha temple in Hampi	Oldest shrine. Contains monastery dedicated to Vidyananya of Advaita Vedanta tradition; Shiva, Pampa and Durga temples.
Ganagitti temple complex in Hampi	Jain Temple. Dated to Hindu king Harihara II. Dedicated to Tirthankara Kunthunatha (17 th Tirthankara)
Hemkunta Hill in Hampi	Contains monolithic Ganesha, Narasimha & Jain temples.
Other Monuments in Hampi	Ahmad Khan Tomb; Hemkutta Hill Monuments; Krishna Temple; Mahanavmi Platform; Kodandarama Temple.

Note: Hampi contains remains of monuments belonging to **Hindu, Jain as well as Muslim religion**.

Dekho Apna Desh

- It is a webinar series launched by **Ministry of Tourism**, to promote domestic travel and provide information on many hidden destinations in India.
- It provides an in-depth knowledge on several destinations & takes a close look at Indian culture and heritage.
- The **first webinar, 'City of Cities – Delhi's Personal Diary'**, took place on April 14, and touched upon the history of Delhi.

- Recently, DekhoApnaDesh Webinar series titled **"Punjab- A historic perspective"** took the participants on a journey through the history and prominent tourist places in Punjab.
- The focus was on
 - ✓ **Virasat-e- Khalsa Museum**, an architectural marvel commemorating the 550-years of culture and tradition of Punjab and Sikhism and
 - ✓ **Partition Museum**-world's first museum on the largest human migration.
- DekhoApnaDesh Webinar Series is an effort to showcase India's rich diversity under **Ek Bharat Shreshtha Bharat** programme.

DHRUPAD

GS-I INDIAN HERITAGE & CULTURE

Context

- Two Dhrupad singers are giving online lessons on the principles and intricacies of the style of Hindustani classical music.

Dhrupad

- Dhrupad is the **oldest surviving classical style of Hindustani vocal music.**
- Dhrupad music traditionally has three major parts - **alap, jor-ihala, and composition.**
- A dhrupad is introduced by **a slow tempo**, with recurrent set of syllables (non-words) known as an alap.
- The singer attempts to emphasize the **purity and clarity of each note, with perfect pitch.**
- The alap is followed by the jor - a raga that develops a steady beat which is non-cyclical, and then continues into a **faster paced ihala.**
- The song concludes with the Dhrupad composition, usually is set in **chau taal (12 beat cycles), sul tall (10 beat cycles) triva taal (7 beat cycles) or dhamar (14 beat cycles).**
- There are several different gharanas (traditions) of Dhrupad. Some traditions center around a location (e.g., Vishnupur) while others reflect a given style (bani).
- Dagar:** This is the most well known of the gharanas worldwide. Other Gharanas include: **Bettiah, Darbhanga, Jaipur Beenkar, Mewati, Kadri, Talwandi, Vishnupur, Rampur etc.**
- There are said to be four broad stylistic variants (vanis or banis) of classical dhrupad - **the Gauri (Gauhar), Khandar, Nauhar, and Dagar.**
- Dhrupad are performed by a solo singer, or a small number of singers in unison, to the beat of a barrel drum, the mridangam or pakhawaj, and can be accompanied by a sitar.
- The songs are highly devotional, and are mostly in **praise of Hindu deities.**
- In early times Dhrupad was **sung in the temples**, the singer facing the divinity. About six centuries ago, Dhrupad came to be **patronised by the royal courts.**
- The language of Dhrupad changed from Sanskrit Brij Bhasha sometime between the 12th and the 16th century.
- In later times Dhrupad declined with the shift of interest in Khayal.
- The earliest **source that mentions** a musical genre called **Dhrupad is Ain-i-Akbari of Abu Fazl (1593).**

Origin

- The origins of Indian classical music can be traced to Samaveda, one of the four Vedas.
- The Samaveda was chanted with the help of melody and rhythm called **Samgana.**
- Gradually this developed into other vocal style called 'Chhanda' and 'Prabandha' with introduction of verse and meter.
- The fusion of these two elements led to the emergence of Dhrupad.

PATRIKA GATE

GS-I INDIAN HERITAGE & CULTURE

Context

- Prime Minister Narendra Modi recently inaugurated the Patrika Gate in Jaipur.

Who built it and where?

- Patrika Gate derives its name from newspaper and media company-Rajasthan Patrika.
- It has been built by Rajasthan Patrika in association with JDA- Jaipur Development Authority.
- The gate is built on Jawahar Circle near Sanganer International Airport. **Jawahar**



Circle is one of the biggest circular parks in Asia developed on a highway traffic circle.

Patrika Gate

- The idea of building this gate is linked with the old city gates of Jaipur walled city.
- When Maharajah Sawai Jai Singh II founded the pink city in 1727 AD, he secured the city with a wall and seven gates.
- Later Sawai Man Singh built a new gate (eighth) gate. The Patrika Gate has now become the ninth gate of Jaipur.
- The city was founded on the principles of Shilp Shastra and Vaastu. Several building and temples were built on the same axis--**Govind Dev Ji Temple, Jaipur City Palace, Garh Ganesh Temple, the Albert Hall Museum, Tripolia Gate, and the New Gate.** Now, Patrika Gate is being represented as the ninth gate of Jaipur.

Art & Architecture

- Patrika Gate is inspired by the old architectural legacies. The facade is inspired by the traditional architecture and features like **Jharokhas, Pals, Pavilions, and Chhatris.**
- It is flanked by figures of **elephants, horses, and soldiers.**
- The images and elements of Rajasthan are brought alive in Patrika Gate through its **hand-painted walls and ceilings.**
- There's famous **Bani Thani painting, Jal Mahal, Mehrangarh Fort, Srinathji,** legendary rulers to name a few.
- Artists have also depicted the **scenes from daily lives** that were popular subjects of ancient and medieval paintings.

The role of Number 9

- Number nine plays a critical part in the making of the Patrika Gate. There are a total of nine pavilions. Each pavilion is 9 feet wide. The width of the gate is 81 feet and height is 108 feet. Also, Patrika Gate is the ninth gate of Jaipur.
- Relevance: The number nine holds great significance in our traditions and beliefs such as the Nine Gates, Nine Planets, Navratra (Nine Nights) etc. It is considered an auspicious number.

Jaipur

- Jaipur was founded in 1727 by the **Rajput ruler Jai Singh II, the ruler of Amer.**
- It was one of the earliest planned cities of modern India, **designed by Vidyadhar Bhattacharya.**
- Jaipur forms a **part of the west Golden Triangle tourist circuit** along with Delhi and Agra.
- On 6 July 2019, UNESCO World Heritage Committee inscribed Jaipur the 'Pink City of India' among its **World Heritage Sites.**
- The city is also home to the **UNESCO World Heritage Sites Amber Fort and Jantar Mantar.**
- Jaipur is also known as the Pink City, due to the dominant color scheme of its buildings.

ROGAN ART

GS-I INDIAN HERITAGE & CULTURE

Context

- Rogan art practicing families have been motivating themselves and connecting digitally during the pandemic.

The art

- Rogan is an **ancient textile art**, with its **origins in Persia.** It came **to Kutch, Gujarat** around 300 years ago.
- Rogan painting **began among the Khatris - a Muslim community** who came to India from Sindh, Pakistan.
- Traditionally, the craft was used to beautify bridal clothing of the regional tribes.
- The term Rogan means 'Oil-based' in Persian and refers to a paint made from thick brightly colored **castor seed oil.**
- This paint is laid down on fabric using either a metal block (printing) or a stylus/kalam (painting).
- Pattern: Intricate motifs like- **geometric flowers, peacocks, the tree of life,** etc. - are drawn from the history and folk culture of the Kutch region.
- An extraordinary aspect about this technique is that during the entire process of the gummy paint being carefully twisted into motifs, the blunt needle never comes into contact with the cloth.



Other important Painting Styles in India

Pichwai	Rajasthan	Miniature style. Made on cloth. Depicts Lord Krishna related stories.
Patachitra	Bengal, Odisha	Cloth-based scroll painting. Mythological narratives and folktales
Kalighat Paintings	Bengal	Themes- Mythology, Daily life, Social evils, Independence Movement
Kalamkari	Andhra Pradesh	Hand-painted. Use of tamarind pen & natural dyes. Hindu epic scenes.
Kishangarh School	Rajasthan	Individualistic facial type. Radha-Krishna Theme. Large landscapes.
Madhubani	Bihar	Use of: fingers, twigs. In Mithila area by women. Geometrical patterns. GI tag
Warli	Maharashtra	Theme: Mother Nature. Rudimentary wall paintings. Symbolic shapes
Kangra	Himachal Pradesh	Patron- Maharaja Sansar Chand. Theme- Bhakti, Jayadev's love poems etc.
Thanjavur Paintings	Tamil Nadu	Secular + Religious (Hindu, Muslim, Jain) Themes. Timeline- 1600 AD.
Phad	Rajasthan.	Scroll painting depicting folk deities Pabuji or Devnarayan.
Mandana Paintings	Rajasthan & MP	On Wall & floor. Use of chalk on cowdung. To protect home & welcome Gods.
Nirmal Painting	Telangana	On wood surface. Bright colors touched with golden hues.
Pithora Painting	Gujarat	By Rathwa and Bhilala tribes. Ritual to thank God. Wall painting.
Thangka Paintings	Arunachal, Himachal	Tibetan art depicting a Buddhist deity.

PUNNAPRA VAYALAR UPRISING

GS-I MODERN HISTORY

Context

- A report by the Indian Council for Historical Research (ICHR) has suggested dropping the Communist martyrs of Punnapra-Vayalar, Karivelloor and Kavumbayi agitations from the list of martyrs of India's Independence struggle.

The uprising

- The Punnapra-Vayalar uprising (October 1946) was a **communist uprising in the Princely State of Travancore**, British India against the Diwan (Prime Minister), C. P. Ramaswami Iyer and the state.

Immediate Background

- Sir CP Ramaswami Iyer had proposed constitutional reforms making Travancore an independent country, not joining Indian Union. CP had proposed an 'American model' for Travancore.
- The Communists in Travancore opposed this move with the slogans, 'Chuck the Americans and British agents into the Arabian Sea'.
- The struggle against the Travancore Kingdom began in 1939. The famine conditions in Travancore Kingdom during the Second World War had pushed the peasants towards the Communists.
- Workers' agitations led by communist trade unions for labour rights during that period culminated in a massive rebellion against the rule of the King and his Diwan (Prime Minister), C. P. Ramaswami Iyer.
- A large number of workers who participated in that rebellion against the rule of Ramaswami Iyer were killed by the army of the Diwan during October 1946.
- Hundreds got killed in police firing at Punnapra, Mararikulam Vayalar, Olathala and Menachery.

Highlights of the recent ICHR Report

- Those Communist agitations cannot be counted as the part of the Independence movement as they took place after the interim government led by Jawaharlal Nehru assumed office.
- The Indian Communists believed that India is not a cultural and political unit. It is the conglomeration of 17 nationalities.
- It is also not the part of Indian freedom struggle. It was to regain the lost image of Communist party.

- Their agitation was against the government of Nehru. So the names, which appear in the project associated with Communist movement in Kerala should be deleted from the yet to be published project.

The Indian Council of Historical Research (ICHR) is an **autonomous body of the Ministry of Education established by an Administrative Order**. The body has provides **financial assistance to historians and scholars** through fellowships, grants, and symposia.

The ICHR receives grants-in-aid from the Department of Higher Education, grants-in-aid from various Indian states, private donations, and the proceeds of revenues from the sale of publications of the ICHR.

PROMOTION OF BUDDHIST SITES

GS-I INDIAN HERITAGE & CULTURE

Context

- Ministry of Tourism has undertaken development of tourism related infrastructure and facilities at various Buddhist Sites in the country.

Buddhist sites

- Buddhist sites have been identified as one of the 15 thematic circuits under the Swadesh Darshan Scheme.

Swadesh Darshan Scheme

- Swadesh Darshan Scheme is a scheme of **Ministry of Tourism**. The scheme aims to promote, develop and harness the potential of tourism in India.
- It is a central sector scheme; i.e. - **100% funded by Central Government of India**.
- Also efforts are made to achieve convergence with other schemes of Central and State Governments.
- The funding available for **Corporate Social Responsibility (CSR)** initiatives of Central Public Sector Undertakings and Corporate Sector is also **used in this scheme**.
- The entire scheme is based on theme-based tourism. Each theme is called a "circuit" and composed of various tourist destinations. The Circuits are:

- | | | |
|--------------------|----------------------|----------------------|
| • Buddhist circuit | • Himalayan circuit | • Spiritual circuit |
| • Coastal circuit | • Krishna circuit | • Sufi circuit |
| • Desert circuit | • North-East circuit | • Tirthankar circuit |
| • Eco circuit | • Ramayana circuit | • Tribal circuit |
| • Heritage circuit | • Rural circuit | • Wildlife circuit |

Initiatives to promote Buddhist Circuit

- **Dedicated website:** www.indiathelandofbuddha.in
- **Buddhist Conclave:** Ministry of Tourism organises Buddhist Conclave every alternate year with the objective of promoting India as a Buddhist Destination and major markets around the globe.
- **PRASHAD Scheme:** Projects for development of infrastructure at religious and spiritual sites have been undertaken under the PRASHAD Scheme.
- **Iconic Tourist Sites:** Ministry of Tourism has identified Buddhist Sites at Bodhgaya, Ajanta & Ellora to be developed as Iconic Tourist Sites.
- **Multilingualism:** Signage have been installed in Chinese language at 5 monuments in Uttar Pradesh: Site and Stupa and monastery of the Sakyas Piprahwa- Lucknow Circle; Sravasti – Lucknow Circle; Ancient Buddhist site of Sarnath- Sarnath Circle; Chaukhandi Stupa – Sarnath Circle; Buddhist relics and Mahaparinirvana temple located at Kushinagar- Sarnath Circle.
- Signage in Sinhali language at Sanchi monuments in Madhya Pradesh has also been installed.

KAKATIYA DYNASTY

GS-I ANCIENT HISTORY

Context

- A temple constructed by Ganapati Deva, ruler of Kakatiya dynasty, has been converted into an abode of local goddess Balusulamma (Goddess Durga).

Details

- The presiding deity at this 13th century temple was Kakati Devi, the tutelary deity of Kakatiya rulers.
- Due to ravages of time and for no upkeep, the presiding deity got damaged.
- The villagers who had no knowledge about the hoary past of the temple, installed Balusulamma idol and started worshipping.

Kakatiya Dynasty

KAKATIYA DYNASTY	FEATURES
Kakatiya/ Andhra Dynasty	Time period: 1083-1323 AD
Founder	Betaraja I
First Independent Ruler	Prola II (Earlier feudatory of Kalyani Chalukyas)
Capital	First capital : Hanamakonda ; Next - Orugallu, now known as Warangal
Preceded by	Western Chalukyan Empire
Succeeded by	Bahmani Sultanate
Common Language	Sanskrit, Telegu
Religion	Hinduism (Converted from Jainism)
Rani Rudramadevi	First woman ruler of Kakatiya Dynasty
King Rudramba	Thousand-Pillared Temple at Hanamakonda
Kakatiya Ganapati	Built Warangal fort
Foreign visitor during the reign	Marco Polo (Italian) - made note of Rudrama Devi's rule.
Kohinoor Diamond	Originally owned by Kakatiya Dynasty
Earlier known record	Anumakonda inscription of Prataparudra I
Notable Trend	Construction of reservoirs for irrigation. Example of tanks at Pakala and Ramappa.
PrataparudraI/ Rudradeva	Patron of art literature. Authored 'Nitisara' in Sanskrit. Built Rudreswara temple in Anamakonda
Ganapathideva	Built Pakhal Lake in Warangal
Temples	Thousand Pillar Temple or Rudreshwara Swamy Temple-dedicated to Vishnu, Shiva and Surya; Ramappa Temple in Warangal; Golconda Fort in Hyderabad
Conquered by	Ghiyasuddin Tughlaq, Sultan of Delhi. (1323 AD)

QUESTION HOUR

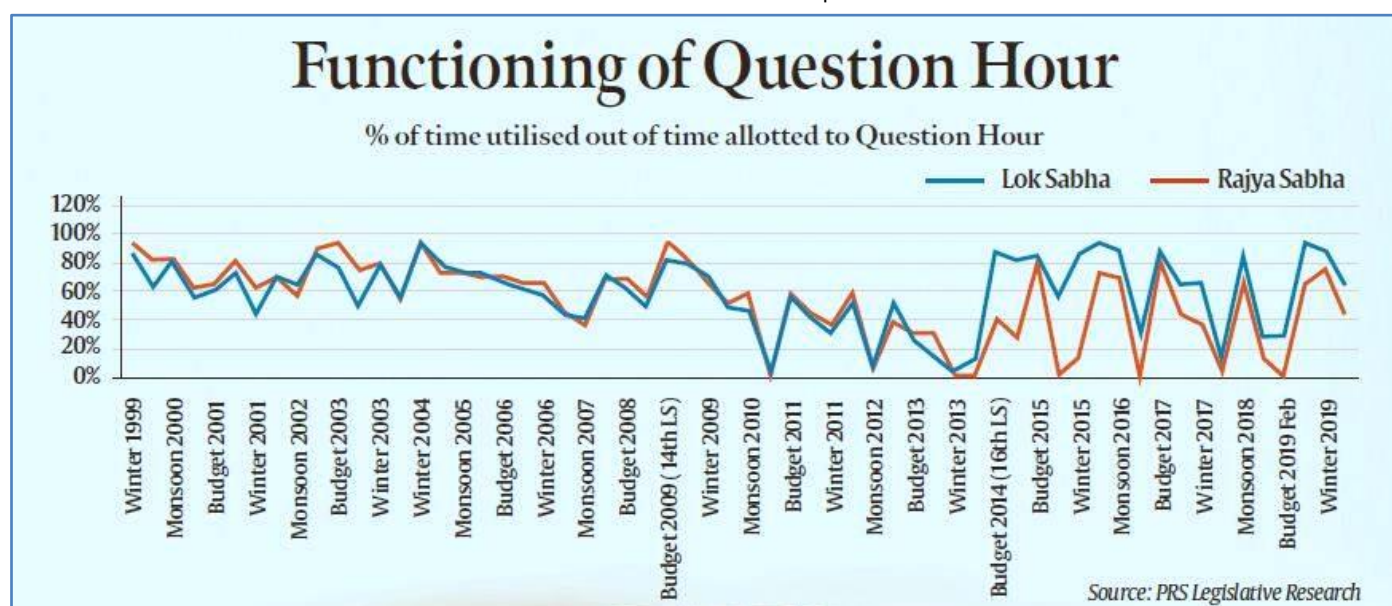
GS-II POLITY

Context

- Question hour session has been dropped in the Monsoon session of Parliament.

About Question Hour

- The first hour of every parliamentary sitting is slotted for this.** During this time, the members ask questions and the ministers usually give answers. The questions are of three kinds, namely, starred, unstarred and short notice.
- A starred question** (distinguished by an asterisk) requires an oral answer and hence supplementary questions can follow.
- An unstarred question**, on the other hand, requires a written answer and hence, supplementary questions cannot follow.
- A short notice question** is one that is asked by giving a notice of fewer than ten days. It is answered orally.
- The list of starred, unstarred, short notice questions and questions to private members are printed in green, white, light pink and yellow colour**, respectively, to distinguish them from one another.
- In addition to the ministers, **the questions can also be asked to the private members. Thus, a question may be addressed to a private member** if the subject matter of the question relates to some Bill, resolution or other matter connected with the business of the House for which that member is responsible.



Zero Hour

- Unlike the question hour, **the zero hours is not mentioned in the Rules of Procedure. Thus it is an informal device available** to the members of the Parliament to raise matters without any prior notice.
- The **zero hour starts immediately after the question hour and lasts until the agenda for the day** (ie, regular business of the House) is taken up.
- It is an Indian innovation in the field of parliamentary procedures and has been in existence since 1962.

Significance

- The questions that **MPs ask are designed to elicit information and trigger suitable action by ministries.**
- Over the last 70 years, MPs have successfully used this parliamentary device to shine a light on government functioning.
- Their **questions have exposed financial irregularities and brought data and information regarding government functioning** to the public domain.
- With the broadcasting of Question Hour since 1991, Question Hour has become one of the most visible aspects of parliamentary functioning.
- Ensures accountability and transparency
- Elicit wider debates on matters
- Helps Government to Explain their Stand

TWO YEARS FIXED TENURE FOR HOUSE COMMITTEES

GS-II POLITY

Context

- The **Rajya Sabha Secretariat is considering changing the rules governing the standing committees' tenure.**
- It is being considered to change the tenure to two years from the present one so that the panels have enough time to work on the subjects selected by them.
- Two options are being looked at:
- To extend the term of the panels for a year.
- To form new committees with a fixed tenure of two years.

Significance of Parliamentary Committees

- **Provide for the deliberations among** the parliamentarians.
- Makes up for the limited sitting of the parliament.
- Parliamentarians are not constrained by their political ideologies.
- **These committees can seek outside expertise** for deliberation on technical matter.
- They ensure accountability of the executive through debate and discussion on the policy.
- **Very helpful in generation all-party consensus.**
- **Represents popular will**
- Increases efficiency and effectiveness of the parliament

About Parliamentary Committee

Type	<ul style="list-style-type: none"> • Standing: Permanent in nature • Select: Made for specific purposes and diluted after completion of work. Like deliberation on the bills.
Powers	<ul style="list-style-type: none"> • Draws their authority from Article 105 (Parliamentary Privileges) and 118 (Power of parliament to make rules)
Standing Committees	
Membership	<ul style="list-style-type: none"> • Lok Sabha and Rajyasabha except for estimates committee which has members only from the Lok Sabha.
Departmental Standing Committee	<ul style="list-style-type: none"> • Total 24 in nature • 8 in Rajyasabha and 16 in Lok Sabha • Related to a specific ministry or departments. • Chairman is appointed by Speaker or Rajyasabha chairman as the case may be. • Can't provide any cut motion • Considers annual reports of the departments or ministry.
Finance Committee	<ul style="list-style-type: none"> • Estimate Committee • Committee on Public Undertaking • Public Account Committee
Committees related to day to day business	<ul style="list-style-type: none"> • Rules Committee • Business advisory committee • Committee on the absence of members • Committee on private members bills and resolutions

DEPUTY SPEAKER

GS-II POLITY

Context

- **This is the first time that the Lok Sabha has functioned for over a year without having a Deputy Speaker.**
- A panel of MPs has been assisting the Speaker.
- Speaker has been requested to fill the post of Deputy Speaker of the Lok Sabha.
- The speaker **has said that it is not the duty of the Speaker to elect the Deputy Speaker of the Lok Sabha.**

About Deputy Speaker

- **Article 93 of the Constitution provides for the election of both the Speaker and the Deputy Speaker of the Lok Sabha.**
- Like the Speaker, the Deputy Speaker is also elected by the Lok Sabha itself from amongst its members.
- **He is elected after the election of the Speaker has taken place. The date of election of the Deputy Speaker is fixed by the Speaker.**
- Whenever the office of the Deputy Speaker falls vacant, the Lok Sabha elects another member to fill the vacancy.

Role of Deputy Speaker

- The **Deputy Speaker performs the duties of the Speaker's office** when it is vacant.
- He also acts as the Speaker when the latter is absent from the sitting of the House.
- **In both the cases, he assumes all the powers of the Speaker. He also presides over the joint sitting of both the Houses of Parliament, in case the Speaker is absent from such a sitting.**
- The Deputy Speaker has one special privilege, that is, whenever he is appointed as a member of a parliamentary committee, he automatically becomes its chairman.

CRIMINALISATION OF POLITICS

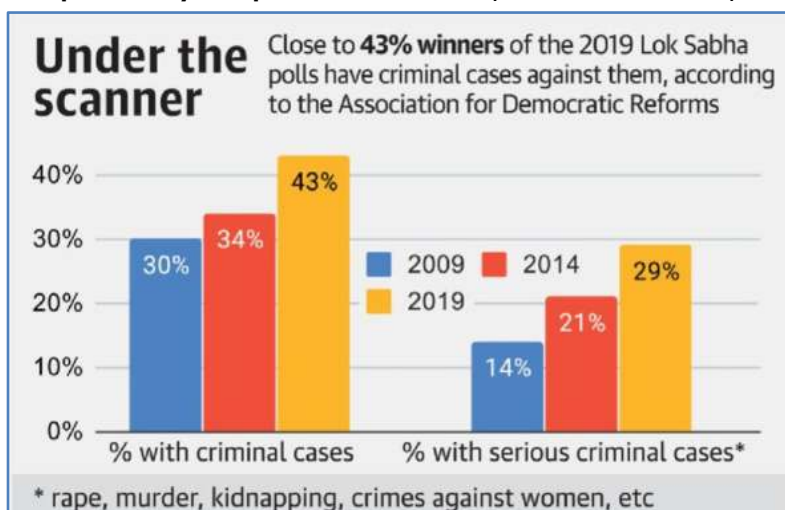
GS-II POLITY

Context

- The **Supreme Court has prioritised the need to expeditiously complete trial in over 4,000 criminal cases**, from corruption to money laundering, pending against legislators across the country.

Criminalisation of Politics

- **Criminalisation of politics is the increase in the power of criminal in affecting the election process and winning as candidate in the elections.**
- This power is seen in three components:
 - **Money Power:** Criminals provide huge amount of black money to political parties to contest the election.
 - **Muscle Power:** Criminals provide Gundas to affect the gullible voters to vote for their party.
 - **Authoritative control:** These criminals have authoritative control over the politics and administration of local area and can completely change the outcome.



Data

- Court observed that In 2004, 24% of the Members of Parliament (MP's) had criminal cases pending against them; in 2009, that went up to 30%; in 2014 to 34%; and in 2019 as many as 43% of MPs had criminal cases pending against them.

Why Criminalisation of Politics is prevalent?

- Lack of political will to prevent the control of criminals.
- **Lack of administrative capability has ensured** that criminals are trusted more by the public to provide delivery of services.
- Since it has invaded all the parties, voters are left with no option.
- Politics of caste and religion has made people overlook the larger interest of society.
- **Decline of societal ethics: violence**, crime is being considered normal by the people. It is even considered imperative to make one's political career.
- **Increasing money and muscle power due to election** becoming highly competitive and expensive in nature.
- Nexus between the administration and politics has also brought criminals into the picture.

Consequences of criminalisation of Politics

- **Lawbreakers are becoming the lawmakers thus** affecting the overall polity of the country.
- **Increase in circulation of black money.**

- Setting a bad example for youth to follow.
- **Introduces a culture of violence in society**
- **Reflect the poor image of the state's institutions**

Legal Provisions

- Currently, under the Representation of the Peoples (RP) Act, lawmakers cannot contest elections only after their conviction in a criminal case.
- Under Section 8 of the Representation of the People (RP) Act, a person convicted with a sentence of two years or more years is disqualified from contesting elections.

Way Forward

- Bringing state funding of the elections
- **Providing power to the Election Commission to undertake the audit of the funds of political parties**
- **Bringing political parties under the ambit of Right to Information act.**
- **Focus on good governance to create choices** for the voters.
- Needs to bring judicial reforms to fast track the court cases of criminals.

LAW PANEL ON VIRTUAL COURTS

GS-II POLITY

Context

- **Parliamentary Panel on Law and Justice has presented its report, "Functioning of the Virtual Courts/Courts Proceedings through Video-Conferencing".**

Recommendation of the Report

- It **has recommended the continuation of virtual courts** even in a post-COVID scenario.
- **Suggested necessary amendments to the law to give legal validity** to virtual courts and their proceedings so that they are not questioned before courts.
- **suggested the feasibility of new financing approaches like the public-private partnership model** for the up-gradation of infrastructure.
- It **also recommended extending virtual courts to cover arbitration** hearings.
- **Virtual courts should be extended permanently for appellate tribunals such as the Telecom Dispute Settlement Appellate Tribunal, Intellectual Property Appellate Tribunal, and National Company Law Appellate Tribunal.**
- **Transfer of certain categories of cases, like cases pertaining to traffic challans or other petty offences,** from regular court establishments to virtual courts will reduce the pendency of cases.

E-Court Project:

- It was conceptualized on the basis of the "National Policy and Action Plan for Implementation of Information and Communication Technology (ICT) in the Indian Judiciary – 2005".

It aimed for:

- Efficient and time bound citizen centric services.
- develop, install and implement decision support system in courts.
- Provide transparency in the course of justice.
- make judicial system more accessible, affordable and cost effective.

Advantage of the virtual court

- cut down the cost and increase efficiency in disposal of the cases without unnecessarily being adjourned.
- **Virtual courts can deliver faster results** with fewer resources.
- They can also reduce commute time to courts and waiting time.
- **Digital justice is cheaper and faster.**
- It addresses locational and economic handicaps, ensures the safety of vulnerable witnesses providing testimony besides expediting processes and procedures.
- **virtual courts are an improvement over traditional ones "as they are most affordable, citizen-friendly and offer greater access to justice".**

Challenges of Virtual Judiciary

- All the evidence can't be produced in e-format. There is a lack of techno legal expertise in the country.
- **There is an issue of cyber security with hackers having access to the evidence produced.**
- It requires lots of e-infrastructure which will require substantial expenditure.

- **Lawyers and judges are not** very comfortable with virtual hearing.
- Recent case of dismissing the PIL of **migrants at the first instance shows that the court requires a physical** presence to showcase the depth of the issue. The court doesn't only deal with facts but they are also a vehicle of social justice which require empathy.
- **E-court requires online police system which becomes a big exercise.**
- Another concern is that almost 50% of lawyers, particularly in district courts, do not have any laptop or computer facility.

Government steps

- Government is **developing the modalities and rules to make it accessible** to all.
- Supreme court has said that **CJI will decide the administrative side of live streaming of cases.**
- Recently, High court of Calcutta has permitted live streaming of a case.

Conclusion

- Openness and transparency reinforce the public's faith in the judicial system. As Swapnil Tripathi noted, "sunlight is the best disinfectant" — all the more important during a pandemic.

Working of the Virtual Judiciary

- We can submit all the papers via mail.
- The judge can decide the case based on all the available information.
- Wherever the judge requires clarifications, he or she can seek the same through email.
- after considering all the material available, the judge can pass a draft order and send it to both sides for any comments which they may want to provide.
- Thereafter, the judge can, after considering the comments, pass the final order.
- This will enhance the quality of the judgment and also eliminate obvious errors.

TIMELINE FOR CANDIDATES

GS-II POLITY

Context

- **The Election Commission (EC) has decided to revise the timeline for political parties and candidates to publish details of the criminal antecedents** of the nominees.
- Political **parties who nominate a candidate with any cases against them and the candidates themselves will have to first publish the details within four days of the last date of withdrawal, then within five to eight days of the last date of withdrawal**, and then between nine days from the last date of withdrawal till the last day of the campaign, which is 48 hours before polling.

About Election Commission

- The **Election Commission of India is an autonomous constitutional authority responsible for administering Union and State election processes in India.**
- **The body administers** elections to the Lok Sabha, Rajya Sabha and State Legislative Assemblies in India and the offices of the President and Vice President in the country.

Article related to election

- **Art.324:** Superintendence, direction and control of elections to be vested in an Election Commission.
- **Art.325:** No person to be ineligible for inclusion in, or to claim to be included in a special, electoral roll on grounds of religion, race, caste or sex.
- **Art.326:** Elections to the House of the People and the Legislative Assemblies of States to be based on adult suffrage.
- **Art.327:** Power of Parliament to make provision concerning elections to Legislatures.
- **Art.328:** Power of Legislature of a State to make provision concerning elections to such Legislature.
- **Art.329:** Bar to interference by courts in electoral matters.

The function of Election Commission

- Preparation of Election Rolls and Photo Identity Cards
- Recognition to Political Parties
- Allotment of Symbols to Parties and Independent Candidates
- Conduct of Elections
- Ensuring Free & Fair Election
- Disqualification on grounds such as being of unsound mind, holding office of profit etc.
- Conduct of Election (Election Procedure)
- Announcement of Elections
- Nominations

- Scrutiny of Nominations
- Publication of List & Election Campaign
- The Poll
- Counting of Votes & Declaring Results

SINGAPORE CONVENTION ON MEDIATION

GS-II POLITY

Context:

- The **Singapore Convention on Mediation, also known as the United Nations Convention on International Settlement Agreements Resulting from Mediation** has come into force.
- **This will provide a more effective way of enforcing mediated settlements of corporate disputes.**
- As on September 1, the Convention has 53 signatories, including India, China and the U.S.

Importance to Singapore Convention

- The **Convention provides a uniform and efficient framework for the enforcement of international settlement agreements** resulting from mediation and for allowing parties to invoke such agreements
- It is **a kin to the framework that the Convention on the Recognition and Enforcement of Foreign Arbitral Awards (New York, 1958)** (the "New York Convention") provides for arbitral awards.
- The Convention defines two additional grounds upon which a court may, on its own motion, refuse to grant relief.
- **Those grounds relate to the fact that a dispute would not be capable of settlement by mediation or would be contrary to public policy.**

About Alternate Dispute Resolution (ADR) Mechanism

- The **concept of Conflict Management through ADR has introduced a new mechanism of dispute resolution that is non-adversarial.**
- It is alternative to the litigation process in the court.

Benefits of ADR

- **ADR facilitates** parties to deal with their issues in a more cost-effective manner and with increased efficacy.
- **It provides parties with the opportunity to reduce hostility,**
- **Regain a sense of control,**
- Gain acceptance of the outcome,
- **Resolve conflict in a peaceful manner,**
- Achieve a greater sense of justice in each case.
- **The resolution of disputes takes place usually in private and is more viable, economic, and efficient.**

Types of ADR

1. Arbitration

- In this, **parties submit their disputes to a neutral third party (the arbitrator) for a decision.**
- The **parties have the independence to chalk out the same** in the arbitration agreement.
- The said agreement which must necessarily precede arbitration should be a valid one as per the Indian Contract Act, 1872.

2. Mediation

- It is a **voluntary, disputant-centred, non-binding method**

of dispute resolution wherein a neutral and credible third party facilitates a settlement between the parties.

CATEGORY	JUDICIAL PROCESS	ARBITRATION	MEDIATION
Speed	Slower/ long-drawn process.	Relatively faster, Time-bound process.	Speedy resolution.
Costs	Increased litigation costs for longer durations in addition to Court fees.	Reduced costs as time bound.	Relatively inexpensive
Control over Costs	Limited as Court fees determined by Rules.	Fees of arbitrators can be pre-determined by parties.	Court-fee returnable, parties can decide fees of mediator.
Appointment of decision-making authority.	No control of parties-only judicial officers.	Experts from specific field can be appointed by the parties, with pre-determination of fees..	Parties can appoint mediator of choice.
Procedure for conduct of proceedings	Settled as per law.	Parties have authority to decide.	As per parties' convenience, not settled.
Evidence and Submissions	As per the law of evidence and CPC.	Parties can determine their own procedure.	Not bound by rules of evidence-flexible.
Forum Selection	Beyond control of parties.	Parties can exclude/ limit or confer jurisdiction on forum of choice.	Mediator is appointed on selection by the parties.
Privacy	Public proceedings.	Proceedings held in private.	Proceedings in private.
Appeal	Decision is appealable, as a matter of right.	Very limited grounds for appeal.	Settlement acceptable to both the parties is final and is not appealable.

- It is **ideal where the emphasis of the parties is on building relationships, rather than ascertaining the party at fault for what has already transpired.**
- The **outcome of a successful mediation is a settlement agreement and not a decision.**

ENEMY PROPERTIES

GS-II POLITY

Context

- The **economic advisory council has suggested selling enemy properties valued at over ₹1 lakh crore to take care of the current expenditure.**

About Enemy Property

- **Under the Defence of India Rules framed under The Defence of India Act, 1962, the Government of India took over the properties and companies of those who took Pakistani nationality, after the migration of people in the aftermath of 1965 and 1972 war.**
- These **"enemy properties" were vested by the central government in the Custodian of Enemy Property for India.**
- The **same was done for property left behind by those who went to China after the 1962 Sino-Indian war.**
- The **Tashkent Declaration of January 10, 1966, included a clause that said India and Pakistan would discuss the return of the property and assets taken over by either side in connection with the conflict.**
- However, the Government of Pakistan disposed of all such properties in their country in the year 1971 itself.
- The properties include buildings, land, gold, and jewellery and shares held in companies.

Dealing with Enemy Properties

- **The Enemy Property Act, enacted in 1968, provided for the continuous vesting of enemy property in the Custodian of Enemy Property for India.**

Amendment to Enemy Properties act-1968

- Passed in 2017
- **Expanded the definition of the term "enemy subject", and "enemy firm" to include the legal heir and successor of an enemy.**
- The **amended law provided that enemy property shall continue to vest in the Custodian even if the enemy or enemy subject or enemy firm ceases to be an enemy due to death, extinction, winding up of business or change of nationality.**
- The **Custodian, with prior approval of the central government, may dispose of enemy properties vested in him as per the provisions of the Act.**
- The amendments denied legal heirs any right over the enemy property.

OFFICE OF PROFIT

GS-II POLITY

Context

- President **Ram Nath Kovind has dismissed a plea to disqualify YSRCP Rajya Sabha Member V Vijayasai Reddy, accusing him of holding an office of profit.**

Issue

- It was claimed that **Reddy held office of profit as he had been appointed a Special Representative of the Andhra Pradesh Government at Andhra Bhavan in New Delhi.**

Solution

- The **Election Commission (EC) opined that in view of the provisions contained in the Parliament (Prevention of Disqualification) Act, 1959, Reddy did not incur disqualification for being a Member of Parliament.**

About Office of Profit

What is the concept of 'office of profit'?

- The essence of disqualification under the office of profit law is if legislators holds an **'office of profit' under the government, they might be susceptible to government influence**
- They **may not discharge their constitutional mandate fairly.**

- The **intent is that there should be no conflict between the duties and interests of an elected member.**
- Hence, the office of profit law simply seeks to enforce a basic feature of the Constitution- the principle of separation of power between the legislature and the executive.

Definition of Office of Profit

- The **law does not clearly define what constitutes an office of profit but the definition has evolved over** the years with interpretations made in various court judgments.
- Supreme Court Guidelines to determine office of profit:
 - whether the government is the appointing authority,
 - whether the government has the power to terminate the appointment,
 - whether the government determines the remuneration,
 - what is the source of remuneration,
 - the power that comes with the position.

Constitutional Provision regarding Office of Profit

- **Under the provisions of Article 102 (1) and Article 191 (1) of the Constitution, an MP or an MLA (or an MLC) is barred from holding any office of profit under the central or state government.**
- **Provisions of Articles 102 and 191 also protect a legislator occupying a government position** if the office in question has been made immune to disqualification by law.
- **In the recent past, several state legislatures have enacted laws exempting certain offices from the purview of office of profit.**
- **Parliament has also enacted the Parliament (Prevention of Disqualification) Act, 1959, which has been amended** several times to expand the exempted list.

NCISM BILL 2020

GS-II POLITY

Provisions

- The Bill **sought to repeal the Indian Medicine Central Council Act, 1970.**
- It also **stated that a National Commission for Indian System of Medicine (NCISM), which would consist of 29 members** appointed by the Centre, would be constituted.
- The Bill also **required state governments to set up State Medical Councils for Indian System of Medicine within three years** of the passing of the Bill, i.e. by September 2023.

Responsibilities of National Commission for Indian System of Medicine (NCISM):

- To **frame policies for the regulation of medical** professionals and institutions for Indian System of Medicine
- To **assess the human resources and infrastructure** required in relation to healthcare
- To ensure that the State Medical Councils of Indian System of Medicine adhered to the regulations laid down by the Bill
- To **ensure that the autonomous boards set up under the Bill** worked in coordination with each other.

Objective

- **Availability of adequate and highly qualified medical** professional in the Indian System of Medicine
- **Adoption of latest medical research by the medical professionals** of Indian System of Medicine
- **Periodic assessment of medical** institutions.
- **An effective mechanism for redressal of grievances.**

The National Commission for Homoeopathy (NCH) Bill, 2020

- This Bill **sought to repeal the Homoeopathy Central Council Act, 1973, and establish a quality education** system for homoeopathy medicine.
- The **Bill has the same objectives as that of the Indian System of Medicine Bill, only with a narrow** focus on the branch of Homoeopathy.
- Moreover, **instead of NCIMS, this Bill seeks to establish a National Commission for Homoeopathy (NCH),** which, again, has the same functions as the NCIMS, modified to only be applied to Homoeopathy.

MISSION KARMAYOGI

GS-II POLITY

Context

- The Union Cabinet has given its approval for Mission Karmayogi.

Background

- Capacity of Civil Services plays a vital role in rendering a wide variety of services, implementing welfare programs and performing core governance functions.**

Salient Features

- Mission Karmayogi aims to prepare the Indian Civil Servant for the future by making him more creative, constructive, imaginative, innovative, proactive, professional, progressive, energetic, enabling, transparent and technology-enabled.** Empowered with specific role-competencies, the civil servant will be able to ensure efficient service delivery of the highest quality standards.

The core guiding principles of the Programme will be

- Supporting Transition from 'Rules based' to 'Roles based' HR Management.**
- Aligning **work allocation of civil servants by matching their competencies to the requirements of the post.**
- Emphasize on 'on-site learning' to complement the 'off-site' learning.**
- Create an ecosystem of shared training infrastructure.
- Calibrate all Civil Service positions to a Framework of Roles, Activities and Competencies approach.**
- Opportunity to continuously build and strengthen Behavioural, Functional and Domain Competencies.
- Encourage and partner with the best-in-class learning content creators
- Undertake data analytics in respect of data emit provided by iGOT.
- Enable **all the Central Ministries/Departments to invest their resources towards co-creation and sharing** the common ecosystem of learning through an annual financial subscription for every employee.

Agenda

- Prescribe Annual Capacity Building Plan** for all departments and services.
- Monitor and implementation of Capacity Building Plan.
- Massive capacity building initiative to ensure** efficient service delivery.
- To promote technology-driven learning pedagogy.
- To strengthen common foundations** and remove the departmental silos.
- Setting benchmarks in learning for public** servants.
- Democratization of learning to cover all categories.

Six Pillars of the programme

- Policy Framework
- Institutional Framework
- Competency Framework
- Digital Learning Framework iGOT-Karmayogi
- The Electronic Human Resource Management System
- The Monitoring and Evaluation Framework

Institutional framework

- Prime Minister's Public Human Resources (HR) Council
- Capacity Building Commission
- Special Purpose Vehicle for owning and operating the digital assets and technological platform for online training
- Coordination Unit headed by the Cabinet Secretary.

Financial implications

- To cover around 46 lakh, Central employees, a sum of Rs.510.86 crore will be spent over 5 years from 2020-21 to 2024-25.
- The expenditure is partly funded by multilateral assistance to the tune of USD 50 million.
- A wholly owned Special Purpose Vehicle (SPV) for NPCSCB will be set up under Section 8 of the Companies Act, 2013.
- The SPV will be a "not-for-profit" company and will own and manage iGOT-Karmayogi platform.

Context

- Release of the report by the Annual National Crime Records Bureau report.

Suicide

- The number of suicide cases and accidental deaths registered an increase across the country last year from the 2018 figures.
- The suicide rate in cities (13.9%) was higher compared to the all-India average.
- Accidental deaths in the country increased by 2.3%.
- The rate (per lakh population) increased from 31.1 to 31.5.
- The overall male-female ratio was 70.2:29.8.
- Delhi recorded the highest number of deaths due to dangerous driving and overall road accidents in 2019 among all cities. Delhi, according to the data, was only second to Chennai in reporting road accidents in 2019.
- The number of road accidents in Delhi, however, has seen a decline of 7.2% as compared to 2018.
- The majority of suicides were reported in Maharashtra.
- The maximum cases involving government servants were reported in Tamil Nadu.
- The numbers of suicides in 53 megacities showed an increasing trend from 2016 to 2019, with a 4.6% increase last year.
- In the Central Armed Police Forces, a total of 36 personnel died by suicide.

Road Accidents

- Accidental deaths in the country increased by 2.3%.
- The rate (per lakh population) increased from 31.1 to 31.5.
- The maximum casualties of 30.9% were reported in the 30-45 years age group.

Major Cause of Accidents

- 'traffic accidents' (43.9%),
- 'sudden deaths' (11.5%),
- 'drowning' (7.9%),
- 'poisoning' (5.1%),
- 'falls' (5.1%)
- 'accidental fire' (2.6%)

Reasons behind Suicide

- Family problems (other than marriage related problems)' (32.4%);
- Marriage related problems' (5.5%);
- Illness' (17.1%)

Method of Suicide

- 'hanging' (53.6%),
- consuming poison' (25.8%),
- 'drowning' (5.2%)
- 'self-immolation' (3.8%)

About NCRB

- The National Crime Records Bureau, abbreviated to NCRB, is an Indian government agency responsible for collecting and analysing crime data as defined by the Indian Penal Code (IPC) and Special and Local Laws (SLL)
- NCRB is headquartered in New Delhi and is part of the Ministry of Home Affairs (MHA), Government of India.
- NCRB was set-up in 1986 to function as a repository of information on crime and criminals to assist the investigators in linking crime to the perpetrators.

Objectives of NCRB

- Create and maintain secure sharable National Databases on crimes and criminals for law enforcement agencies and promote their use for public service delivery.
- Collect and process crime statistics at the national level and clearinghouse of information on crime and criminals both at National and International levels.

- Lead and coordinate the development of IT applications and create an enabling IT environment for Police organizations.
- National repository of fingerprints of all criminals.
- To evaluate, modernize and promote automation in State Crime Records Bureaux and State Finger Print Bureaux.
- Training and capacity building in Police Forces in Information Technology and Finger Print Science.

FCRA

GS-II SOCIAL JUSTICE

Context

- Parliament has amended the Foreign Contribution Regulation Act (FCRA) -2006.

About Foreign Contribution

- The foreign contribution is the donation or transfer of any currency, security or article (of beyond a specified value) by a foreign source.

Amended Provisions

Provision	Earlier Part	Amended Provisions
Prohibition to accept Foreign Contribution	Under the Act, certain persons are prohibited to accept any foreign contribution. These include election candidates, editor or publisher of a newspaper, judges, government servants, members of any legislature, and political parties, among others.	The amended act adds public servants (as defined under the Indian Penal Code) to this list.
Transfer of foreign contribution	Under the Act, foreign contribution cannot be transferred to any other person unless such person is also registered to accept foreign contribution (or has obtained prior permission under the Act to obtain foreign contribution).	The amended Act amends this to prohibit the transfer of foreign contribution to any other person.
Aadhaar registration for	The Act states that a person may accept foreign contribution if they have: (i) obtained a certificate of registration from central government, or (ii) not registered, but obtained prior permission from the government to accept foreign contribution.	The amendment adds that any person seeking prior permission, registration or renewal of registration must provide the Aadhaar number of all its office bearers, directors or key functionaries, as an identification document.
FCRA account	Under the Act, a registered person must accept foreign contribution only in a single branch of a scheduled bank specified by them. However, they may open more accounts in other banks for utilisation of the contribution.	The Act amends this to state that foreign contribution must be received only in an account designated by the bank as "FCRA account" in such branch of the State Bank of India, New Delhi, as notified by the central government. No funds other than the foreign contribution should be received or deposited in this account.
Restriction in the utilisation of foreign contribution	Under the Act, if a person accepting foreign contribution is found guilty of violating any provisions of the Act or the Foreign Contribution (Regulation) Act, 1976, the unutilised or unreceived foreign contribution may be utilised or received, only with the prior approval of the central government.	The amendment adds that the government may also restrict usage of unutilised foreign contribution for persons who have been granted prior permission to receive such contribution.
Renewal of license	Under the Act, every person who has been given a certificate of registration must renew the certificate within six months of expiration.	The Bill provides that the government may conduct an inquiry before renewing the certificate to ensure that the person making the application: (i) is not fictitious or benami, (ii) has not been prosecuted or convicted for creating communal tension or indulging in activities aimed at religious

		conversion, and (iii) has not been found guilty of diversion or misutilisation of funds, among others conditions.
Reduction in use of foreign contribution for administrative purposes	Under the Act, a person who receives foreign contribution must use it only for the purpose for which the contribution is received. Further, they must not use more than 50% of the contribution to meeting administrative expenses.	The amendment reduces this limit to 20%.

Criticism

- The amended act points out that government perceive civil society and NGO as antagonistic rather than development partners.
- According to the GoI's FCRA dashboard, there are 22,447 active FCRA registrations in India today. In 2018-19, 21,915 annual returns were filed – a compliance rate of 97.6%. It can hardly be argued that non-compliance is a concern here.
- Making Aadhaar mandatory is another step towards expanding the use and coverage of the unique identity and does little to improve transparency or oversight by the government.
- The stipulation that **all foreign fund recipients need to use SBI bank** accounts will only increase the transaction costs for organisations that receive such funds.
- The amendment does not explain what it is that the government finds objectionable about a public servant being involved in public causes through non-governmental organisations.
- **Limiting the contribution to administrative expenditure to 20%** will make life difficult for larger organisations who have higher overheads (administrative costs).
- **Allowing suspension of license for more than 180 days by the Home Ministry provides draconian powers in the hands of the government.**
- It will end up harming cutting edge projects in everything from education and health to gender justice and social empowerment.
- According to the International Commission of Jurists (ICJ), the legislation fails to comply with "**India's international legal obligations and constitutional provisions to respect and protect the rights to freedom of association, expression, and freedom of assembly.**"

The reasoning of the Government

- This was **necessary to curtail proselytization as some religious** institutions were beneficiaries of the earlier FCRA regime.
- Advocates of the Bill say misguided environmental concerns and agenda-based **activism have put brakes on several key developmental projects, and that many such NGOs involved in these protest movements are recipients** of foreign funding.
- **The government argues that** the legislation is an attempt to bring transparency.
- Law has been updated further to "prevent the misuse of foreign funds" by those who receive it.

Way Forward

- Government has cancelled the licenses of civil society from time to time due to non-compliance with FCRA.
- Civil society groups need to become more transparent in working to avoid disproportionate use of power.
- The government should provide for an accreditation body for self-regulation of the civil society.

SAME SEX UNIONS

GS-II SOCIAL JUSTICE

Context

- The Centre has opposed before the Delhi High Court, a petition seeking recognition of same-sex marriages.

Arguments in favour

- "**Homosexuality**" is unnatural therefore **homosexuals** ought not to be permitted to enter the natural institution of marriage.
- **Marriage is unique in the sense that it was created by God for the procreation** and raising of children by a mother and father. Homosexual can't procreate.
- **Same-sex marriage ruins the sanctity of marriage.**

- The right to marry is **fundamental but the right to marry someone of the same sex is not. Before a fundamental right can be recognized, a "deeply rooted tradition" must be found.** Homosexuality is not a deeply rooted tradition.
- The **legislature, not the courts should decide how to make profound social changes.**
- Marriage is **to encourage stable relationships because people in them are more likely to contribute to a stable society.**
- Legalizing same-sex marriage could lead to the acceptance of polygamy and incest.
- **Indian law authorizes marriages only between men and women.**

Counter Arguments

- Homosexuality, or what is called homosexuality, **demonstrably exists in nature, and whatever exists in nature is natural.** We humans exist in nature, homosexuality is therefore not unnatural.
- The traditional family structure already in many cases subject to family violence, divorce, substance abuse, etc
- Not **allowing same-sex marriage penalizes children by depriving them of state benefits because the state disapproves** of their parents' sexual orientation? Research shows that children adopted by gay parents thrive as well as other children.
- Why are **people who are unable to reproduce aren't allowed to marry?** Why aren't marriages that fail to generate offspring cancelled after a set time?
- Same-sex marriage may ruin the religious standard of marriage. However, the fact of the matter is that homosexuals want marriage in the purely legal form and religions do not have to approve of this.
- **Courts have recognized that rights can be fundamental even if** they were traditionally considered immoral or even criminal, as long as they have become "implicit in the concept of ordered liberty".

Section 377

- Section **377 refers to 'unnatural offences' and says whoever voluntarily has carnal intercourse against the order of nature with any man, woman or animal, shall be punished with imprisonment for life, or with imprisonment of either description for a term which may extend to 10 years, and shall also be liable to pay a fine.**

Way Forward

- Society is continuously moving forward. Supreme Court has already struck down section 377 of Indian Penal Code thus recognizing the homosexuality.
- **Courts and legislatures have to work together. Same-sex couples deserve a full range of marriage options.**
- Every constitution allows for the realization of the full potential of an individual. Allowing same-sex marriage will provide dignity to the people.

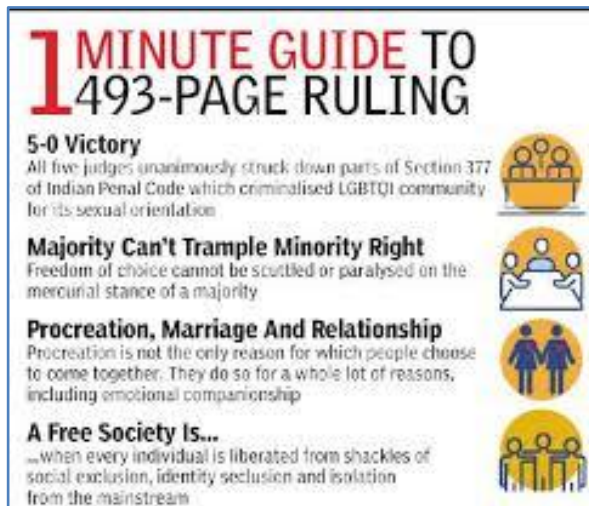


Figure 1: Supreme Court Verdict on Section 377

LABOUR CODES

GS-II SOCIAL JUSTICE

Context:

- The Rajya Sabha and Lok Sabha passed three labour codes namely, Industrial Relations Code, 2020 (ii) Code on Occupational Safety, Health & Working Conditions Code, 2020 (OSH) & (iii) Social Security Code, 2020.

Details

- 29 labour laws have been merged into four Labour Codes.
- Structure of welfare and rights of **Atmanirbhar Shramik** is based on four pillars.
- 1. Salary protection**
- 2. Labour safety**
- In the OSH Code, annual health check-up has been provided for workers above a certain age.
- Additionally, to keep the standards related to safety effective and dynamic, they can be replaced with changing technology by the National Occupational Safety & Health Board.
- To provide a safe environment, workers and employers should decide together, for this, a safety committee has been provided for in all institutions.

- OSH Code envisages a safe working environment for workers especially women.
- OSH Code reduced the minimum qualification from 240 days to 180 days for leave.
- The Bill also provides for the payment of at least 50 percent of the penalty imposed on an employer for injury or death at the workplace, to the aggrieved worker, in addition to other benefits.

3. Comprehensive Social Security

- Scope of ESIC and EPFO is being extended in the Social Security Code.
- To increase the scope of ESIC, a provision has been made that now its coverage will be in all 740 districts of the country.
- In addition to this, the option of ESIC will also be for plantation workers, unorganized sector workers, gigs and platform workers, and institutions with less than 10 workers.
- If there is a risky work in an institute, that institute will inevitably be brought under the purview of ESIC even if it is a sole labourer.
- Similarly, to increase the scope of EPFO, the schedule of the institutions has been removed in the current law and now all those institutions which have 20 or more workers will come under the ambit of the EPF.
- Apart from this, the option of EPFO for institutions with less than 20 workers and self-employed workers is also being given in the Social Security Code.
- To provide social security to 40 crore unorganized sector workers provision for "Social Security Fund" has been made.

4. Peace and harmony in industrial units

- Fixed Term Employees' service conditions, salary, leave and social security will be the same as a Regular Employee.
- In addition, the Fixed Term Employee has also been given the right to pro-rata Gratuity.
- Before going on the strike, the 14-day notice period obligation has been imposed on every institution to attempt to end the dispute through amicable negotiations during this period.
- Threshold in Retrenchment, Closure or Lay-off in the IR Code has been raised from 100 workers to 300 workers.
- Trade Unions are being recognized at the institution level, state level and centre level.
- A provision of the Re-skilling Fund has been made to increase the chances of employment again if any worker is missed. These workers will be given 15 days salary for this.
- An effective dispute resolution mechanism is being ensured through the Industrial Relations Code providing for time-bound dispute resolution system in every institution

CHART 1: TYPES OF LABOUR LAWS	
CONDITIONS OF WORK	
■	Factories Act, 1948
■	The Contract Labour (Regulation & Abolition) Act, 1970
■	Shops and Commercial Establishments Act
WAGES & REMUNERATION	
■	The Minimum Wages Act, 1948
■	Payment of Wages Act, 1936
SOCIAL SECURITY	
■	Employees' Provident Fund Act, 1952
■	Workmen's Compensation Act, 1923
■	Employees State Insurance Act, 1948
EMPLOYMENT SECURITY & INDUSTRIAL RELATIONS	
■	The Industrial Disputes Act, 1947
■	Industrial Establishments (Standing Orders) Act, 1946

Capital and Labor (Philosophical basis of Labor Laws)

- A market economy is sustained by a set of laws — the laws of contract, of property, and so on.
- This legal structure ensures that **capital and labour do not face each other as equals** across a mythical bargaining table.
- There is a **structural inequality that enables capital to "make the rules"** for the labour.
- This amounts to a form of "private government", a situation in which there exists democracy in the political sphere, but unilateral term set in the context of the workplace.
- With the rise of the platform or gig economy, the rise of casualisation and precarious employment, and further fractures within the workforce, this inequality of power has only grown starker.

Need for Labor Laws

- The purpose of labour laws has always been to **mitigate this imbalance of power**.
- It has aimed to **secure the "rights to life, liberty, and the pursuit of happiness"**, in both the public and the private spheres.
- In some countries, the path chosen has been to give workers a stake in private governance, through strong trade union laws and mandatory seats for labour in the governing boards of firms ("co-determination").
- It seeks to **free from the compulsion** that is exerted by serious and enduring differences of power, a compulsion that may not take a physical form, but instead, has a social or economic character.
- In other countries (such as India), the path has been to create a detailed set of laws, covering different aspects of the workplace, and depend upon State agencies for their enforcement.

- In the recent World Bank survey, companies **have not to highlight labour inflexibility as the top 10 concern** regarding the investment.
- Removal of labour laws will lead to **increased tension between organisations and labour** leading to reduced productivity.
- For employers, the availability of a skilled workforce and **cooperative labour-management relations were far more important** than flexible labour laws.

Need for Reform

- Our laws **are meant only for labour protection not for** generating employment.
- Labour is a means of a factor of production. Labour laws have made them end in the production affecting the productivity of enterprises.
- India **has around 55 labour** laws, which creates complexities for firms.
- Labour laws have led to the establishment of inspector raj.
- **Creates inflexibility in the labour** market.
- **Restricts ease of doing** business
- Small companies do not want to become big due to challenging labour laws.
- Increases litigation cost for the companies.
- Laws mainly protect 10% formal workers while leaving aside the 90% casual workers who make up the largest workforce of the organization.

Challenges in reforming labour laws

- Labour subject lies in the concurrent list thus require central as well state political will for reforms.
- Labour is a big political vote bank, which disincentives the parties to go ahead with labour law reform.
- There is a widespread chance of a nationwide strike.
- Labour is a comprehensive subject and its reforming requires very substantial changes in the law.

Way Forward

- Focus must be on policy certainty, strengthening macro parameters of economy, creating ease of doing business through better contract enforcement rather than complete removal of the labor laws.

LANGUAGE OF THE LAW

GS-II SOCIAL JUSTICE

Context

- A plea was filed by **the citizens who protested against the publication of the draft EIA notification in only English and Hindi.**

Argument of Petitioner

- such **a policy excludes a large number of Indians** who do not speak Hindi or English from participating in the public consultation process.
- They **demand that the draft be published in 22 Indian** Languages.
- **Publication in English and Hindi only prevents the participation** of the masses in law-making exercise.
- **Two High Courts have asked the government to publish the notification** in all 22 languages mentioned in Schedule VIII to the Constitution.
- It is reasonable to argue that citizens are not bound by laws that are not made available to them in their local language.
- **The Supreme Court of India in Harla v. the State of Rajasthan, 1951 has ruled that citizens are not bound by laws that have not been published and publicized.**
- The language policy of the government doesn't recognize the language diversity of India.

Government Argument

- it is not required by **the law to publish these notifications in the 22 languages mentioned in Schedule VIII.**
- Government is arguing **that the translation may result "in the meaning of the words being obfuscated and often even lost",** thereby leading to greater legal uncertainty.
- The **Official Languages Act, 1963 requires the publication of the law in only English and Hindi.**

Example of the European Union

- **EU has a policy in place to respect the linguistic diversity of its member** nations.

- In the European Union (EU) – multi-linguistic jurisdictions, all EU-level official documents are made available in all 24 official languages of member States.
- This policy allows all EU nationals to communicate with EU institutions in any of the 24 official languages and these institutions are required to respond in the same language.

Legal Act

- **The Authoritative Texts (Central Laws) Act, 1973** which creates a legal mechanism to recognise authoritative translations of all central laws into languages mentioned in the Schedule VIII to the Constitution of India.
- This law extends to rules and delegated legislation issued under central laws.

Way Forward

- Central government offices, such as the passport office, should give citizens the option to engage with the government in a language of their choice.
- Only the Unique Identification Authority of India (UIDAI) which runs the Aadhaar digital identity programme has an inclusive language policy allowing citizens to get identity cards in languages other than English and Hindi.
- An inclusive language policy must be integral to the law-making and enforcement process.
- All the Proceedings of the parliamentary debates and committees must be published in all 22 scheduled languages.

ASPIRATIONAL DISTRICT PROGRAMME

GS-II SOCIAL JUSTICE

Context

- A study conducted by the US-based Social Progress Imperative (SPI) and the Institute for Competitiveness (IFC), India, showed that apart from agriculture and financial inclusion, initiatives on water resources and skill development are two other parameters that need greater attention in the ADP programme going forward.
- The Aspirational Districts Programme (ADP) is one of the largest experiments on outcomes-focused governance in the world.

About Aspirational Districts Programme

- The ADP is Niti Aayog's flagship initiative to improve health, nutrition, education, and economic outcomes.
- It is spread across 112 of India's socio-economically challenged districts.
- Niti Aayog plays a mentoring role in 27 districts in eight states, home to about 60 million people.

Framework behind ADP

- The ADP's theory of change rests on three pillars: Competition, Convergence, and Collaboration.
- Competition fosters accountability on district governments for outcomes (instead of inputs) using high-quality data.
- **Convergence creatively brings together the** horizontal and vertical tiers of the government.
- **Collaboration enables impactful partnerships between government, philanthropy and civil society.**
- **Pioneering state and district-level initiatives in both the ADP and non-ADP districts in areas prioritised** under the programme.
- Spurred by **competition on outcomes, local governments target their efforts and improve programme implementation** and design.
- The focus on outcomes enables local experimentation based on a firm appreciation of ground realities.
- **Partnerships** between various philanthropic and civil society organisations with district governments augment local capacity.
- The **programme has shifted focus away from inputs and budgets to outcomes, such as learning and malnutrition**, at the highest echelons of the government.
- It has **also introduced non-financial incentives to encourage government officials to deliver results.**
- The **programme has also developed a lean data infrastructure that smartly exploits complementary strengths** of administrative and survey data.

ISSUE OF BEGGARY**GS-II SOCIAL JUSTICE****Context**

- The Ministry of Railways has proposed to decriminalise begging on trains or railway premises.

Data on Beggars in India

- In a written reply to Rajya Sabha, Minister of Social Justice said that there were 4,13,670 beggars – 2.2 lakh male and 1.91 lakh female beggars.
- According to a survey of Delhi School of Social Work, there has been a phenomenal increase in beggars in India.

Reasons behind Beggary

- **Poverty:** One of the major factors that force people to make a miserable beggary. It does not mean that enough to support themselves or their families, many people resort to begging.
- **Unemployment:** But poverty alone cannot be held responsible because all those living in poverty are not used to beggary.
- **The lucrative business:** Because of easy profits and income from begging, some people can earn enough to make it as a career instead of doing honest labor. Not only that, many people make it as business and exploit others by investing some money in this business.
- **Disorganized family:** Family is part of the relationship of our society, which affect our patterns of behavior and activities. Any disruption in our home state, especially in the case of a poor one leads to a breakdown of the family, which do arise in beggary.
- **Lack of Parental Control:** The parents do not have the industrial center of control necessary for their children, but mothers also often go to factories to work. As a result children can switch to energy in any direction. If they fall into bad company, they can develop love of travel, can lead to beggary.
- **Disability or illness:** The physical disabilities such as blindness, deafness or acquired in the beginning had this effect lot of people to beg as economic conditions of their families so as not to afford the maintenance of the disabled.
- **Lack of spirit:** There are people who lack mental or insane and unable to earn any living and they are forced to beg.

Effects

- They affect every single individual of society.
- The future of child is ruined
- It leads to prostitution, drug addiction and crime.
- They are disturbing health system by spreading communicable diseases.
- They are disturbing economic system as there is unequal distribution of wealth.

Way Forward

- Laws dealing with beggary should be strictly enforced.
- Beggars should not be allowed to stay in the public places like railway stations, markets, etc.
- Government should open special clinics for the treatment of leprosy and mental patients.
- Underground beggar organisation should be checked by public and police and should be given capital punishment.

Conclusion

- The problem of beggary is a knotty one. We have to fight it from all sides. Only those who are crippled, homeless, and helpless should be helped.

INDO-PACIFIC CLUB**GS-II INTERNATIONAL RELATIONS****Context**

- Germany joins Indo-Pacific club aimed at securing trade routes from aggressive China.

Key details

- Germany has drafted a 40-page guidelines as it formally adopts a strategy for the Indo-Pacific region.
- The move makes it the second European nation after France to formally adopt a strategy for the Indo-Pacific region.
- The strategy is designed to allow Germany to make an active contribution to shaping the international order in the Indo-Pacific.
- The move by Germany augurs well for the Quad, which is constituted by the United States, Japan, Australia, and India.

Why there is growing mood of distemper toward China throughout Europe?

Recent policies of China, which includes

- crackdown in Hong Kong,
- aggressive treatment of the Uyghurs in the Xinjiang region of western China
- the numerous expansionist moves, and
- Irresponsible behaviour regarding initial alert system in the COVID-19 pandemic caused distrust in European countries.

The Quad and its future

- Australia, India, Japan, and the United States - four strong and consistent democracies of the world - had created the Quad about 12 years ago.
- This international grouping, left for dead a decade earlier, was brought back to life amid concerns over China's increasingly aggressive behavior.
- Quad is a symbolic network of strategic and defence cooperation among four highly capable Indo-Pacific democracies that has shared concerns on regional security.

India and Quad

- Quad member nations, still lack consensus on the nature of grouping and India seemed a weakest link as it is the only quad country that share border with China.
- China's Belt and Road Initiative, the Doklam issue, interference in Canberra's politics, rubbing Japan the wrong way on the East China Sea, attempting to undermine Hong Kong's citizens' rights and attempt to overpower Taiwan - has pushed India to become a committed partner in the Quad.

How big a role will Germany take on?

- Germany Indo-Pacific guidelines focus on maritime security cooperation, human rights, and the diversification of Germany's economic partnerships in the Indo-Pacific in order for it and regional partners to "to avoid unilateral dependencies."
- Though Germany is unlikely to break any business ties with China, its guidelines for the Indo-Pacific is a move to help shape a order that it is based on rules and international cooperation, not on the law of the strong.

FIVE POINT PLAN TO DE-ESCALATE LAC STAND OFF**GS-II INTERNATIONAL RELATIONS****Context**

- India-China agreed on a five-point course of action to disengage and reduce tensions along the Line of Actual Control (LAC), where Indian and Chinese troops have been engaged in a four and a half month long stand-off.
- The meeting between the foreign ministers was facilitated and encouraged by Russian Foreign Minister.

The five-point plan is

- not allow differences to become disputes
- disengaging quickly to ease tensions
- abiding by the existing India-China border protocols and avoiding escalatory action
- continuing the dialogue between Special Representatives as well as the other mechanisms and
- Working towards new confidence-building measures (CBMs).

Joint statement

- The two sides agreed that the current situation in the border areas is not in the interests of either side.
- The border troops of both sides should continue their dialogue, quickly disengage, maintain proper distance and ease tensions.
- Both sides also issued separate notes detailing their positions, indicating that several differences still remain in their agreement of the situation at the LAC, which has seen violent clashes, deaths of soldiers and gunfire exchanges for the first time in 45 years this summer.
- The immediate task is to ensure a comprehensive disengagement of troops in all the friction areas to prevent any untoward incident in the future.
- The final disposition of the troop deployment to their permanent posts and the phasing of the process is to be worked out by the military commanders.

Ignored Issues

- However, neither the joint statement, nor the notes issued by spokesperson talks about return to the "Status quo ante" or positions prior to the stand-off in April.
- Nor it specifically call on China to retreat from positions it has aggressed on at Pangong Tso, Depsang and other parts of the LAC.

What is the significance of the India-China five-point Action Plan?

- It reiterates the process of dialogue, disengagement, and easing of the situation.
- All this was comprehensively dealt with in the previous five agreements given below:
 - The 1993 'Maintenance of Peace and Tranquility Agreement' forms the basis of all follow-up agreements.
 - 1996 'Confidence Building Measures' denounced the use of force
 - 2005 'Standard Operating Procedures' and patrolling modalities.
 - 2012 'Process of Consultation and Cooperation'
 - 2013 'Border Cooperation Agreement', signed as a sequel to Depsang intrusion by People's Liberation Army (PLA).

What should be India's future strategy?

- China has not been able to achieve its aims either politically or militarily due to India's firm and resolute response.
- India must continue its proactive posture not only in Ladakh but across the complete length of LAC.
- After all, it's the position on the ground which will decide the trajectory of talks on the negotiations table.
- Above all, we must insist on April 2020 status quo and make it clear to the Chinese that the border issue cannot be delinked from bilateral relations.

INDIA BANGLADESH INLAND WATERWAYS

GS-II INTERNATIONAL RELATIONS

Context

- The Sonamura-Daukandi inland waterways protocol route between Tripura and Bangladesh made operational.
- As part of efforts to boost connectivity between India and Bangladesh a new riverine trade route is opened.
- The forthcoming Agartala-Akhaura rail project, Indo-Bangla bridge over River Feni and a second Integrated Check Post (ICP) at Sabroom are also aimed at taking up the quantum of trade between the two sides.

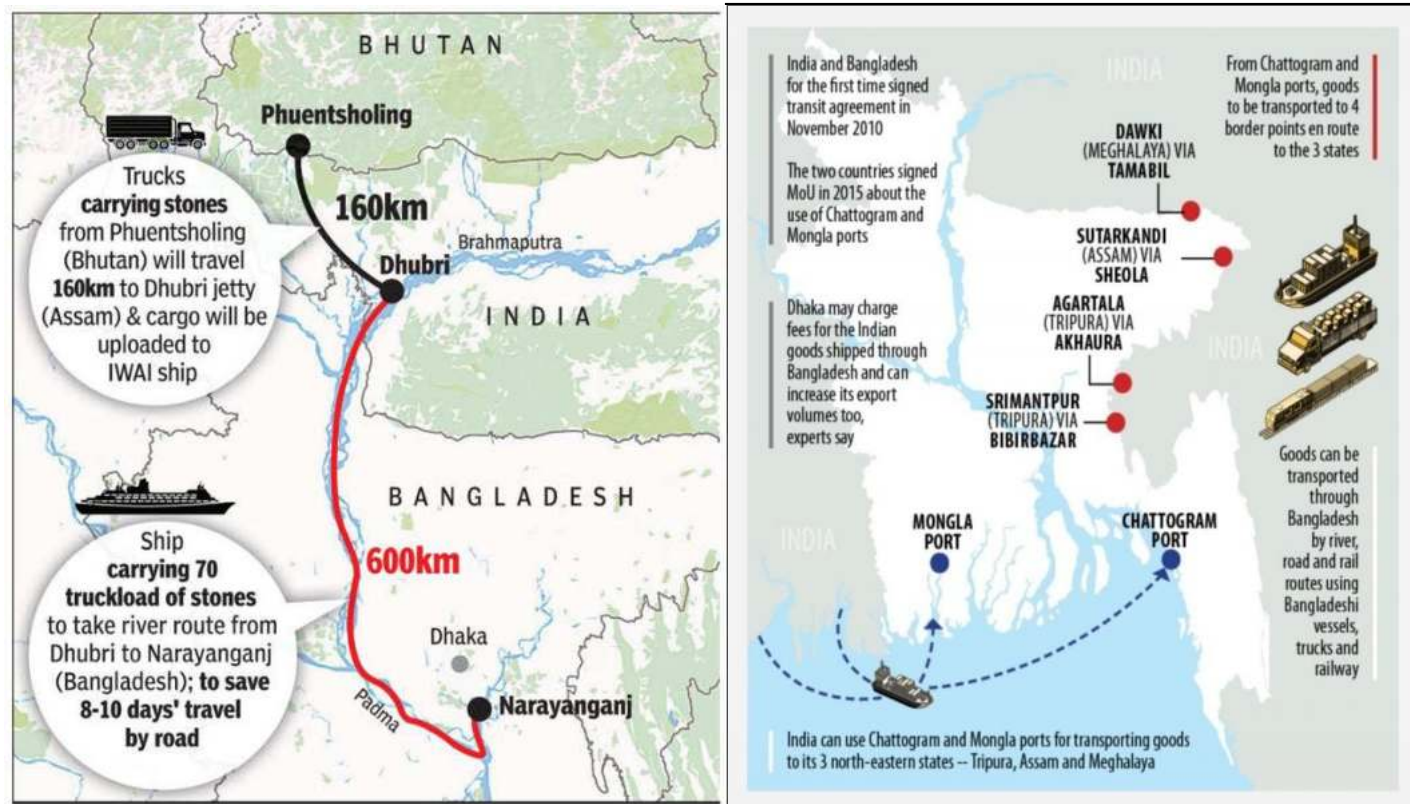
About India-Bangladesh inland waterway route

- The route connects Tripura with the National Waterways of India through Bangladesh.
- It will open up new avenues for economic development in both the countries where Tripura will play an important role.
- The 90-km long Sonamura-Daukandi route, included in the list of Indo-Bangla protocol (IBP) routes, is expected to boost trade.
- A floating jetty was set up on the Gomati River as part of the Indo-Bangla international inland waterways connectivity project.

What the opening of waterway with Bangladesh means for Tripura?

- Tripura's cross-border trade commenced in 1995.
- Currently, the state exports a handful of goods and materials worth Rs 30 crores to Bangladesh annually, but imports good worth Rs 645 crore.
- Given the state has six other land crossings, the waterway project's trade volume would remain low because the river route would not stay operational throughout the year

- Low transportation would not create massive local employment.
- Dredging of river is necessary given the shallow depth of riverbed and constant sedimentation in the areas where the river meanders below hills.
- Will make river Gomati navigable.



River Gomati

- River Gomati is the largest and longest river of Tripura with cumulative length of 180 km.
- It is also considered a sacred river and devotees converge along its banks at Tirthmukh every Makar Sankranti.
- Gomati is also a regulated river.
- Due to the high altitude of in its upper catchment and Dumbur dam built in 1974 as part of the Gumti hydro-electric power project, the river erodes a lot of sand and rocky particles in its upper segment.
- The flow slows down a lot after it reaches the plains and at Maharani Barrage in Gomati district, a large volume of the water is extracted for irrigation and is held back for beautification of Dumbur dam as a tourist spot.
- A river needs at least 4-5 feet depth for goods carriers to navigate on a regular basis.
- Gomati riverbed remains navigable for less than four months a year, that too only during monsoon days.

SUPPLY CHAINS RESILIENCE

GS-II INTERNATIONAL RELATIONS

Context

- Australia-India-Japan Ministers' trilateral meeting on Supply Chains Resilience held.

Highlights of the meeting

- During 2019, the cumulative merchandise goods and services trade between India, Japan and Australia was \$ 2.7 trillion and \$0.9 trillion respectively.
- Member nations reaffirmed their determination to take a lead in delivering a free, fair, inclusive, non-discriminatory, transparent, predictable and stable trade and investment environment by keeping their markets open.
- Recognized the important role of business and academia in realizing the objective.
- India endorsed the concept of working towards ensuring a trustworthy, dependable and reliable supply chain in the Indo-Pacific region.
- Need to expand this initiative among like-minded countries, for ensuring resiliency in the supply chains of this region.
- Key parameters that could be looked at are the market oriented policies, demography, growth potential, fiscal state of play including existing debt burdens and geo-political strategy.

Supply Chains Resilience initiative

- Supply Chains Resilience initiative aim to support free, fair, inclusive, non-discriminatory, transparent, and stable trade and investment environment.
- The diversification of supply chain is critical for managing the risks associated with supply of inputs including disciplining price volatility.
- Linking value chains in the region by creating a network of reliable long-term supplies and appropriate capacities.
- Digitization of trade procedures for facilitating trade and thereby maintaining resilience in supply chains.
- Transparency and trust are the hallmark of this initiative.

What is Indo-Pacific region?

- In terms of geo-spatiality, the Indo-Pacific is broadly to be understood as an interconnected space between the Indian Ocean and the Pacific Ocean.
- Its expanse is debated to be ranging from the eastern shores of Africa to the western coast of the United States, with variations in definitions depending on each actor and their own geographic positioning in the vast expanse.



INDIA JAPAN RELATIONS

GS-II INTERNATIONAL RELATIONS

Context 1

- India and Japan have signed an agreement concerning Reciprocal Provision of Supplies and Services between the Armed Forces of India and the Self-Defense Forces of Japan.
- This agreement will enhance the interoperability between the Armed Force of India and Japan, further increasing the bilateral defence engagements under the Special Strategic and Global Partnership.

Context 2

- Japan has committed an official Development Assistance loan of 3 thousand 500 crore rupees for the COVID-19 Crisis Emergency Response Support.

This programme loan aims

- to support India's efforts in fighting COVID-19
- to prepare the health system to manage future epidemics
- To improve the resilience of India's health systems against infectious diseases.
- Provide medical equipment to strengthen the public health and medical system in India.

Introduction

- India and Japan have had a long and fruitful history of bilateral development cooperation since 1958.

- In the last few years, the economic cooperation between India and Japan has strengthened and grown into strategic partnership.
- It further consolidates and strengthens the Strategic and Global Partnership between India and Japan.
- In this light, here is an overview of Indo-Japan relations

India - Japan bilateral Relations

Historical relations

- The friendship between India and Japan has a long history rooted in spiritual affinity and strong cultural and civilizational ties.
- The people of India and Japan have engaged in cultural exchanges, primarily as a result of **Buddhism**, which spread indirectly from India to Japan, via China and Korea.
- In contemporary times, prominent Indians associated with Japan were Swami Vivekananda, Gurudev Rabindranath Tagore, JRD Tata, **Netaji Subhash Chandra Bose** and Judge Radha Binod Pal.
- The **Japan-India Association** was set up in 1903, and is today the oldest international friendship body in Japan.
- Contacts between India and Japan began some 1400 years ago, but the two countries have **never been adversaries**.
- Bilateral ties have been singularly free of any kind of dispute – ideological, cultural or territorial.

Political relations

- Positive legacy of the old association was further strengthened by shared values of belief in democracy, individual freedom and the rule of law.
- In the first decade of diplomatic ties establishment, several high level exchanges and visits took place.
- A transformational development in the economic history of India was Suzuki **Motor Corporation's** path breaking investment in India in the early 1980s that revolutionized the automobile sector, bringing in advanced technology and management ethics to India.
- A test of the reliability of Japan as a friend was witnessed in 1991, when Japan was among the few countries that **unconditionally bailed India out of the balance of payment crisis**.

Timeline of indo-japan relation up-gradation

- In 2000, the Japan-India **Global Partnership** in the 21st century was launched.
- In 2006 factored in the new challenges, and the relationship was upgraded to a **Global and Strategic Partnership**.
- In 2014, the two sides upgraded the relationship to a '**Special Strategic and Global Partnership**'. Both sides also agreed to establish the 'India-Japan Investment Promotion Partnership'.
- The two countries have several institutional dialogue mechanisms, which are held regularly, at senior official and functional levels to exchange views on bilateral issues as well as regional and international cooperation.
- India conducts **2+2 Dialogue** (at the level of Foreign and Defense Secretaries) with Japan.

Economic and Commercial Cooperation

- Economic relations between India and Japan have vast potential for growth.
- Japan's interest in India is increasing due to its large and growing market and its resources, especially the **human resources**.
- The India-Japan **Comprehensive Economic Partnership Agreement (CEPA)** that came into force in August 2011 is the most comprehensive of all such agreements concluded by India and covers not only trade in **goods** but also **Services**, Movement of Natural Persons, Investments, Intellectual Property Rights, Custom Procedures and other trade related issues.
- The CEPA envisages abolition of tariffs over 94% of items traded between India and Japan over a period of 10 years.
- India also announced "**visa on arrival**" **scheme** for all Japanese travelers, including for business purposes, from March 1, 2016.
- A '**Japan-India Make in India Special Finance Facility**' of JPY 1.3 trillion was also established.
- Japan has been extending bilateral loan and grant assistance to India since 1958, and is the **largest bilateral donor for India**.
- Mega projects like Ahmedabad-Mumbai High Speed Rail, the Western Dedicated Freight Corridor (DFC), the Delhi-Mumbai Industrial Corridor with twelve new industrial townships, and the Chennai-Bengaluru Industrial Corridor (CBIC) will transform India-Japan relations in the next decade.
- India's primary exports to Japan have been petroleum products, chemicals, elements, compounds, non-metallic mineral ware, fish & fish preparations, metalliferous ores & scrap, clothing & accessories, iron & steel products, textile yarn, fabrics and machinery etc.
- India's primary imports from Japan are machinery, transport equipment, iron and steel, electronic goods, organic chemicals, machine tools, etc.

- Japanese FDI into India has mainly been in automobile, electrical equipment, telecommunications, chemical and pharmaceutical sectors.
- In 2018, India-Japan signed **currency swap agreement**.

Science & Technology and Cultural Cooperation

- The bilateral Science & Technology Cooperation Agreement signed in 1985 underpins the bilateral S&T cooperation.
- The India-Japan Science Council (IJSC) was established to support joint projects, exchange visits of scientists, joint seminars/workshops etc.
- In 2006, Department of Science and Technology (DST) initiated a value based partnership working on the principles of 'reciprocity and co-funding with the Japan Society for the Promotion of Science (JSPS) and Japan Science and Technology Agency (JST) through MEXT (Ministry of Education, Culture, Sports, Science and Technology).
- Annually "Japan-Asia Youth Exchange Program in Science" also known as the "**SAKURA Exchange Program**" implemented by DST and JST.

2016 nuclear deal

- The deal took six years to negotiate, delayed in part by the 2011 Fukushima nuclear disaster.
- This is the **first time that Japan signed such deal with a non-signatory of Non-Proliferation Treaty**.
- The deal gives Japan the right to supply nuclear reactors, fuel and technology to India.
- This deal aimed to help India build the six nuclear reactors in southern India, increasing nuclear energy capacity ten-fold by 2032

Cultural relations

- In 1951, India established a scholarship system for young Japanese scholars to study in India.
- The Vivekananda Cultural Centre in Tokyo offers classes on Yoga, Tabla, Bharatanatyam, Odissi, Sambalpuri, Bollywood 5 dances and Hindi and Bengali languages.
- MoU signed in 2015 between Yoga Organisation of Japan and the Quality Council of India for the promotion of Scheme for Voluntary Certification of Yoga.

India-Japan Digital Partnership (IJD) and Start-up Hub

- In view of synergies and complementarities between the two nations, "India-Japan Digital Partnership" (I-JDP) was launched in 2018.
- Both sides signed Joint Statement on Japan-India Startup Initiative setting up the first Startup Hub in Bangalore to identify selected Indian start-ups for Japanese market and for potential Japanese investors.
- Startup-India (under Invest India) and Japan Innovation Network (JIN) have signed a MoU on innovation collaboration with a focus on SDGs (Sustainable Development Goals) connecting two start-up eco-systems.

Disaster Risk Reduction

- Cabinet Office of Japan and Ministry of Home Affairs of India jointly organized a series of workshops to exchange information on policy and measures on disaster risk reduction, and to enhance cooperation between Japan and India.

Healthcare

- In view of the similarities and synergies between the goals and objectives India's AYUSHMAN Bharat Programme and Japan's AHWIN, both sides had been consulting with each other to identify projects to build the narrative of AHWIN for AYUSHMAN Bharat.

Liquidity Boost

How Does It Help

WHAT IS CURRENCY SWAP: One country exchanges its national currency for that of another or even a third one

INDIA-JAPAN SWAP: India can acquire yen or dollars from Japan up to \$75 billion in exchange for rupees. The exchange has to be reversed after an agreed period

TERMS OF AGREEMENT: The facility is entered into between central banks of two countries. The terms of the swap and its cost are also included. The exchange rate is typically fixed for a transaction. The borrowing bank pays interest for use of funds

RBI's \$393-billion chest gets a one-shot \$75 billion boost

There is no immediate cost; only when an amount is drawn

Short-term liquidity mismatches can be met quickly

It improves market sentiment, curbs speculative pressure on the rupee

Foreign investors will draw comfort from the arrangement

INDO-JAPAN CIVIL NUCLEAR DEAL

India and Japan sign historic civil nuclear cooperation deal

Key Points

- Japan can now supply nuclear reactors, fuel and technology to India
- India can purchase new generation of nuclear reactors with over 1,000 MW capacity with hi-tech safety features
- India will get state-of-the-art nuclear fuel fabrication and breeder technology from Japan
- Tokyo had earlier asked for further commitments from New Delhi on nuclear non-proliferation, but later gave up on the conditions
- India persisted on its stand that it cannot go beyond what it had agreed to with the US on a similar nuclear deal and eventually convinced Japan on the terms



KBK InfoGraphics

The Treaty on the Non-Proliferation of Nuclear Weapons or Non-Proliferation Treaty

- It is an international treaty whose objective is to prevent the spread of nuclear weapons and weapons technology, to promote cooperation in the peaceful uses of nuclear energy, and to further the goal of achieving nuclear disarmament and general and complete disarmament.
- India, Israel, Pakistan and South Sudan, has not joined it.

Indian Community in Japan

- The old Indian community in Japan focused on trading in textiles, commodities and electronics.
- The recent composition of the Indian community now include number of professionals, including IT professionals and engineers working for Indian and Japanese firms as well as professionals in management, finance, education, and S&T research.
- Approximately 38,000 Indians live in Japan. The Nishikasai area in Tokyo is emerging as a "mini-India".
- The Indian community lives harmoniously and has developed relations with local governments to become valuable members of the Japanese community.

Defense Relations

January 17, 20



INDIA-JAPAN DEFENCE & SECURITY PARTNERSHIP

by Sameer Patil,
Director, Centre for International Security,
& Fellow, National Security Studies

Defence and security cooperation is a critical component of India's strategic partnership with Japan, flourishing since 2015 through enhanced political and bureaucratic dialogue and exchanges in military staff. Bilateral interactions apart, New Delhi and Tokyo have had opportunities for regional engagement through the trilateral Malabar naval exercises (between Indian, U.S. and Japanese navies) and consultations within the Quad. This infographic examines the India-Japan partnership in the defence and security arena.

GATEWAY HOUSE

Major Agreements & Mechanisms

- Agreement between the Government of Japan and the Government of the Republic of India Concerning the Transfer of Defence Equipment and Technology (2015)
- Agreement between the Government of Japan and the Government of the Republic of India Concerning Security Measures for the Protection of Classified Military Information (2015)
- Implementing arrangement for deeper cooperation between the Japan Maritime Self-Defence Force and Indian Navy (2018)
- Acquisition and Cross-Servicing Agreement (under negotiation)



Policy Dialogues

- Annual Defence Ministerial Dialogue
- National Security Advisers' Dialogue
- Defence Policy Dialogue
- 2+2 Dialogue at the level of Foreign and Defence Secretaries
- Foreign and Defence Ministerial Dialogue (proposed)
- Staff-level dialogue at the level of the three services
- India-Australia-Japan-U.S. Consultations (informal mechanism, known as the 'Quad'), first summit of the grouping's leaders on the sidelines of the 2017 ASEAN Summit in Manila



Military Exercises

SERVICE	EXERCISE	COMMENCED IN	FOCUS
Navy	JIMEX	2012; resumed in 2018 after a five-year gap; accompanied by regular air Anti-Submarine Warfare (ASW) exercises	ASW, Visit Board Search and Seizure (VBSS) drills, cross deck helicopter operations
	MALABAR	Held annually since 1992 (India-U.S.); permanent Japanese participation since 2015	Aircraft carrier operations, air defence, ASW, VBSS operations
Air Force	SHINYUU MAITRI	2018	Joint mobility, Humanitarian Assistance and Disaster Relief operations
Army	DHARMA GUARDIAN	2018	Counter Terrorism

Defence Cooperation

- Joint Working Group on Defence Equipment and Technology Cooperation – initiated in 2014
- Project Arrangement concerning the cooperative research on the Visual Simultaneous Localisation and Mapping Based Global Navigation Satellite System Augmentation Technology for Unmanned Ground Vehicle and robotics – signed in 2018
- Japan-India Defence Industry Forum – held in 2017
- Ongoing negotiations for purchasing ShinMaywa US-2 amphibious aircraft



Areas of concerns and consensus

- **Economic and social development:** India need Japan support for implementing big infrastructure projects such as Mumbai-Ahmedabad High Speed Rail and grassroot level projects like Swachh Bharat, where Japan is assisting efforts to clean the Ganga.
- Japan joined International Solar Alliance (ISA). Both are member of G20.
- **Peace and prosperity:** Free, open, stable and peaceful Indo-Pacific region is priority of both India and Japan, considering the aggressive adventurism of China in South-China Sea.
- **Delayed project:** India-Japan joint collaboration with Sri Lanka to develop the Colombo South Port and make it a shipping hub of the Indian Ocean need to be completed on war footing.
- **Collaboration:** Japan and India have common interest in areas such as the SDGs, United Nations reform, including Security Council reform, global warming mitigation and free and open multilateral trading systems.

Conclusion

- Building upon the trust, Japan-India relations will take greater strides in the coming years. In a world where uncertainties and unpredictability are pervasive, a firm Japan-India relationship exemplifies a strong force that promises stability.

"A strong India is in Japan's interest, and a strong Japan is in India's interest".

THE 13th AMENDMENT (SRI LANKA)

GS-II INTERNATIONAL RELATIONS

Context

- The first-ever India-Sri Lanka Virtual Bilateral Summit held.

Major Outcomes

- Central government announced a grant assistance of 15 million dollars to Sri Lanka for the promotion of Buddhist ties between India and Sri Lanka.
- The grant will assist in deepening people-to-people linkages between the two countries in the sphere of Buddhism.
- Indian side would facilitate the visit of a delegation of Buddhist pilgrims from Sri Lanka in the first inaugural flight to Sacred City of Kushinagar.
- Indian government called upon the new government in Sri Lanka to work towards realizing the expectations of Tamils for equality, justice, peace and dignity within a united Sri Lanka by achieving reconciliation nurtured by implementation of the Constitutional provisions.
- It emphasized that implementation of the 13th Amendment to the Sri Lankan Constitution is essential for carrying forward the process of peace and reconciliation.

13th Amendment to the Sri Lankan Constitution

- It is an outcome of the Indo-Lanka Accord of July 1987, signed by the then Prime Minister Rajiv Gandhi and President J.R. Jayewardene, in an attempt to resolve Sri Lanka's ethnic conflict that had aggravated into a full-fledged civil war, between the armed forces and the Liberation Tigers of Tamil Eelam, which led the struggle for Tamils' self-determination and sought a separate state.
- The 13th Amendment, led to the creation of Provincial Councils, which assured a power sharing arrangement to enable all nine provinces in the country, including Sinhala majority areas, to self-govern.
- Subjects such as education, health, agriculture, housing, land and police are devolved to the provincial administrations, but because of restrictions on financial powers and overriding powers given to the President, the provincial administrations have not made much headway.
- In particular, the provisions relating to police and land have never been implemented.
- Initially, the north and eastern provinces were merged and had a North-Eastern Provincial Council, but the two were de-merged in 2007 following a Supreme Court verdict.

Recent Developments

- In an outright display of thaw in ties between India and Sri Lanka, Sri Lanka has made it clear that it's strategic security policy will have an **"India first" approach** though Colombo remains open to dealing with other key players for **economic development**.
- The new Sri Lanka government has adopted a **posture of neutrality** in its dealings with key powers at the regional and global level.
- Sri Lanka assured that it cannot become a **"staging area"** for any country to do **"anything against another country – especially...India"**.

Changes in Sri Lanka Policy

"INDIA IS RELATIVE, WHEREAS CHINA IS A FRIEND"

In South Asian context

RELATIVES ARE FOR KEEPS, FRIENDS WILL COME AND GO"

- Sri Lankan government will not hand over total control of strategic national assets to a foreign power following the experience with Hambantota port, which was given to China Merchant Port Holding for 99 years.
- Sri Lanka will not do anything harmful to India's strategic security interests and termed Hambantota port deal with China a mistake.
- In future ventures, Sri Lanka will retain a 51% stake in any project with foreign investment.
- Despite stiff opposition from port worker trade unions, President Rajapaksa went ahead with the memorandum of cooperation signed with India on the Colombo Port's Eastern terminal.
- The previous Srisena government signed the MoU with India and Japan for a tripartite effort to develop the terminal, and it is ready to honour the agreement.

Significance of Sri Lanka for India

- The relationship between India and Sri Lanka is more than 2,500 years old

- Both countries have a legacy of intellectual, ethnic, cultural, religious and linguistic interaction
- Sri Lanka is India's closest maritime neighbor and is strategically located in Indian Ocean and Bay of Bengal.
- 70% of Indian cargo comes through the Colombo port, which is a largest trans-shipment port of South-Asia.

Missed opportunity

- Sri Lanka had offered India Hambantota first but New Delhi did not undertake the project following which it went to a Chinese company.

Measures taken by India

- India has focused on improving ties with Rajapaksa's administration.
- India was the first country to congratulate the present President of Sri Lanka on being elected.
- India announced a **\$400-million currency swap facility** for Sri Lanka under the SAARC framework
- Colombo's request for a **bilateral swap facility for \$1.1 billion** is also being considered by India.
- When Rajapaksa visited India after becoming president, New Delhi announced a \$400-million line of credit to boost infrastructure and development, and offered another **\$50 million to fight terrorism and enhance intelligence gathering**.
- Modi's neighbourhood policy is predicated on his 'sabka saath, sabka vikas' vision for inclusive growth.
- India has promoted regional cooperation in South Asia in a spirit of generosity, without insisting on reciprocity.
- Before covid hit, largest number of tourist visiting SL were Indians.
- Defence cooperation's are foundation of Indo-Lanka relation, which involve active cooperation of forces, cooperation at foreign ministry level.

Challenges in front of Sri Lanka

- China is the second-largest economy and India is considered the sixth-largest, Sri Lanka is trying to make a balance between two economic giants.
- It is difficult choice for Sri Lanka as China is one country willing to invest and they have the capacity to do it but it should not threaten security of India in the name of economic prosperity.

Acts that display of thaw in ties between India and Sri Lanka

- The visit of Sri Lankan Prime Minister Mahinda Rajapaksa to India in February marked the beginning of a new chapter in ties with a friendly neighbour, one with which India has close historical bonds straddling culture, religion, spirituality, art and language.
- There is a growing convergence against terrorism following the Easter attacks in Sri Lanka last April.
- Several infrastructure projects, direct flights between Chennai and Jaffna, resumption of ferry services, India's new lines of credit and construction of houses for the internally displaced, homeless and landless people, are indicative of a new warmth in relations.
- Both Mahinda Rajapaksa and his brother President Gotabaya chose India as the destination for their first overseas visits after assuming office bodes well.
- There is deep appreciation in Sri Lanka for the free emergency services provided through 280 ambulances gifted by India, now operational in eight of the country's nine provinces.
- There are much better prospects today for tri-lateral cooperation between India, Japan and Sri Lanka in the development of the East Container Terminal at Colombo port.

India-Sri Lanka Bilateral Relations

Political Relations

- Unpleasantness in bilateral relations raised in 1983, when the Anti-Tamil violence in Sri Lanka dragged India into Tamil-Sinhalese Conflicts.
- With an objective of improving ties, Indo-Sri Lanka Peace Accord or Rajiv Gandhi-Jayewardene Accord was signed in 1987, which proposed devolution of power to the nine provinces in Sri Lanka. (Popularly known as 13th Amendment to the Sri Lankan Constitution)
- India-Sri Lanka relations hit a new rock bottom when in 2009, 2012 and 2013 India voted against Sri Lanka at UNHRC resolution to investigate human right violations and war crimes by state government against Tamil rebels.

Commercial Relations

- India is one of the largest investors in Sri Lanka with cumulative investments of around USD 1.2 billion.
- Sri Lanka is one of India's largest trading partners in SAARC.
- Trade between the two countries grew rapidly after India-Sri Lanka Free Trade Agreement 2000.

Development Cooperation

- Indian Housing Project, commitment to build 50,000 houses for the war affected as well as the estate workers in the plantation areas. In 2017, PM signed an agreement to commence construction of 10,000 additional houses.
- The aid package includes funding for electricity power projects and north-south railway development.
- An auditorium named after Rabindranath Tagore in Ruhuna University, Matara was constructed and handed over by India.
- India announced a new US\$ 100 million Line of Credit for undertaking solar projects in Sri Lanka during the Founding Conference of the International Solar Alliance.

Defence and security Cooperation

- To enhance regional security both countries cooperates in both traditional (Terrorism) and non-traditional security issues (human trafficking and drug smuggling).
- Capacity building and training of armed forces and police personnel of Sri Lanka has been the core area of cooperation between the two countries.
- To ensure maritime security
 - India-Sri Lanka conduct 'SLINEX' a joint naval exercise
 - India, Sri Lanka and Maldives conduct "DOSTI" a trilateral naval exercise
 - India and Sri Lanka hold annual joint military drill 'Mitra Shakti' to boost counter-terror cooperation

Indian Community

- The People of Indian Origin (PIOs) comprise Sindhis, Borahs, Gujaratis, Memons, Parsis, Malayalis, Telugu speaking person and Indian Origin Tamils (IOTs) form a significant portion of Sri Lanka population.

Challenges ahead

- **Pro-China tilt:** Sri Lanka is a member of China's Belt and Road Initiative(BRI)
- **Fishermen issue:** fishermen from both sides have difference on IMBL restriction and traditional fishing grounds. Indian fishermen are accused of fishing deep into Lankan water and using big mechanised trawlers that is affecting both economy and ecology of Sri Lanka.
- **Delays in projects** proposed by India for e.g. not much is known about the status of a project to renovate Kankesanthurai harbour in Northern Province and little progress has been made in developing the Palaly airport.
- India urges devolution of powers based on the **13th amendment** while Sri Lankan government favours a homegrown solution.

Way Ahead

- Indian government should refrain from interfering even indirectly in Sri Lankan internal political affairs
- Indian government should urge Sri Lanka to focus on plight of war affected Tamils. As the Sri Lankan government is backtracking on its commitments to displaced Tamils using the recent terror attacks as an excuse
- India must negotiate with Lankan leader to get approvals for all pending projects

INDUS WATER TREATY (IWT)

GS-II INTERNATIONAL RELATIONS

Context

- September 19 marks the 60th anniversary of the Indus Water Treaty (IWT) between India and Pakistan.
- It is a treaty, is often cited as an example of the possibilities of peaceful coexistence that exist despite the troubled relationship.
- It is often dub as **"uninterrupted and uninteruptible" treaty.**
- The **World Bank**, which, as the third party, played a pivotal role in crafting the IWT.
- India, a responsible upper riparian state under the treaty is under pressure to review this treaty, given political relations with Pakistan has become intractable.

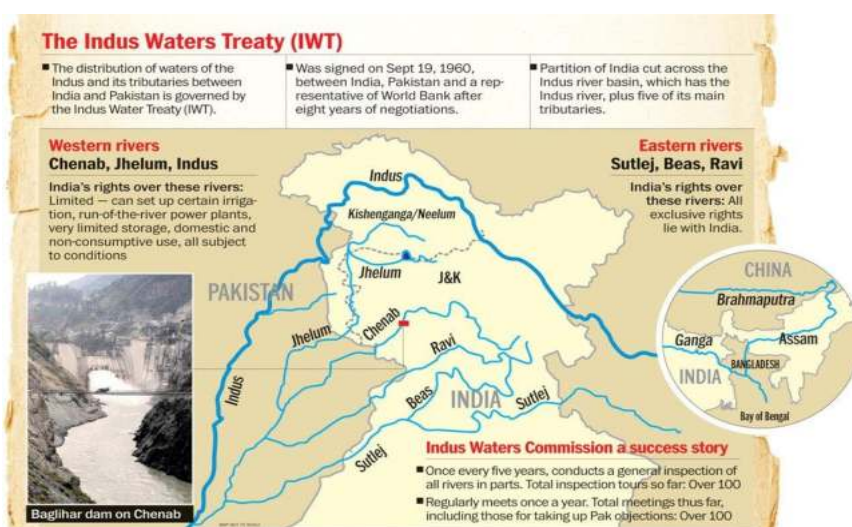
Indus Water Treaty (IWT)

- Equitable water-sharing of the Indus rivers system was inevitable after the Partition of India in 1947.
- The sharing formula devised after prolonged negotiations sliced the Indus system into two halves.
- The three 'western rivers' (Indus, Jhelum and Chenab) went to Pakistan and the three 'eastern rivers' (Sutlej, Ravi and Beas) were portioned to India.
- Equitable it may have seemed, but the fact remained that India conceded 80.52 per cent of the aggregate water flows in the Indus system to Pakistan.
- It also gave Rs 83 crore in pounds sterling to Pakistan to help build replacement canals from the western rivers. Such generosity is unusual of an upper riparian.

- India conceded its upper riparian position on the western rivers for the complete rights on the eastern rivers.

Pakistan viewpoint

- Pakistan, showed a strong resentment on construction of Bhakra-Nangal, grieving that India got away with the total flow of 33 million acre-feet on the eastern rivers.
- Pakistan leadership considers the sharing of the waters with India an unfinished business.
- Pakistan raise issue on Indian projects on the western rivers, in particular Jhelum and Chenab.
- Being a lower riparian state, Pakistan's skepticism of India allows it to increasingly politicize the issue.
- It maintains high troop levels and alertness around the canals on the eastern front, fearing that India will try to take control of the western rivers.
- Due to its strategic location and importance, the Indus basin continues to receive considerable international attention.
- India is under pressure of abrogating the IWT as a response to Pakistan's cross-border terrorism and intransigence.
- Although any attempt towards this would require a number of politico-diplomatic consensus and hydrological factors considerations.
- Several instances of terror attacks — Indian Parliament in 2001, Mumbai in 2008, and the incidents in Uri in 2016 and Pulwama in 2019 — have prompted India, within the Vienna Convention on the Law of Treaties, to withdraw from the IWT. However, on each occasion, India chose not to do so.

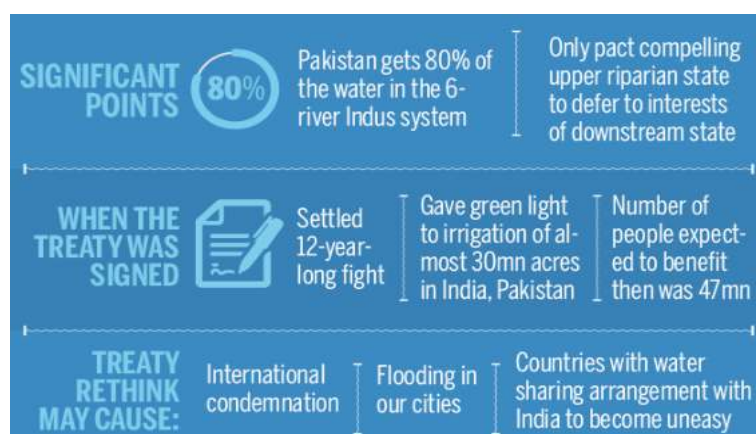


The Vienna Convention on the Law of Treaties (VCLT)

- It is an international agreement regulating treaties between states.
- Also known as the "treaty on treaties", it establishes comprehensive rules, procedures, and guidelines for how treaties are defined, drafted, amended, interpreted, and generally operated.
- The VCLT is considered a codification of customary international law and state practice concerning treaties.
- Since, India is not a signatory of this party, it can withdraw from IWT.

Need of Renegotiation

- With abrogation an option that India is hesitant to take, there is a growing debate to modify the existing IWT.
- While the treaty may have served some purpose at the time it was signed, now with a new set of hydrological realities, advanced engineering methods in dam construction and de-siltation, there is an urgent need to relook at it.
- Even Article XII of the IWT says that it "may from time to time be modified" "by a duly ratified treaty concluded for that purpose between the two governments".
- Pakistan see no merit in any modification having already got a good deal in 1960. India's best option, would be to utilize the provisions of the treaty.



- India has been not utilized the 3.6 million acre feet (MAF) of "permissible storage capacity" granted by the IWT on the western rivers.
- Poor water development projects have allowed 2-3 MAF of water to easily flow into Pakistan which needs to be urgently utilized.
- Further, out of the total estimated capacity of 11406 MW electricity that can be harnessed from the three western rivers in Kashmir, only 3034 MW has been tapped so far.

ARMENIA AZERBAIJAN CONFLICT

GS-II INTERNATIONAL RELATIONS

Context

- Military action in Nagorno-Karabakh, a region disputed between Armenia and Azerbaijan, has resulted in the death of at least 100 civilians and Armenian combatants.
- The two countries have fought over the region for decades, the current conflict is being seen as one of the most serious in recent years.

What is Nagorno-Karabakh?

- It is internationally recognized as part of Azerbaijan, but most of the region is controlled by Armenian separatists, who have declared it a republic called the "Nagorno-Karabakh Autonomous Oblast."
- Nagorno-Karabakh has been part of Azerbaijan territory since the Soviet era.
- When the Soviet Union began to collapse in the late 1980s, Armenia's regional parliament voted for the region's transfer to Armenia; although the Soviet authorities turned down the demand.
- Years of clashes followed between Azerbaijan forces and Armenian separatists.
- In 1994, Russia brokered a ceasefire, by which time ethnic Armenians had taken control of the region.
- Even after the 1994 peace deal, the region has been marked by regular exchanges of fire.
- In 2016, it saw a Four-Day War before Russia mediated peace.
- The Organization for Security and Co-operation in Europe (OSCE) Minsk Group, chaired by France, Russia and the US, has tried to get the two countries to reach a peace agreement.



What is the fresh conflict about?

- It began on September 27, when each country has claimed to have inflicted serious loss on its opponent.
- It is the first time that both countries have proclaimed martial law.
- Reports suggest that the clashes were possibly fallout of Azerbaijan's bid to reclaim some territories occupied by separatist Armenians.

Azerbaijan stand

- Azerbaijan defended the "military operation of the Azerbaijani army to clear the territories occupied by the enemy for almost 30 years".
- It declared September 27 was a "day of exhaustion".
- It alleged Armenia has occupied regions around Nagorno-Karabakh with the "direct support" of Russia to create a "security zone".

What are the stakes for Russia, and other countries?

- The conflict is getting worldwide attention because of the involvement of regional rivals Turkey and Russia.

WHAT IS THE BISHKEK PROTOCOL, WHICH WAS SIGNED 26 YEARS AGO AND REMAINED ONLY ON PAPER?

- Upon the growing volume of Armenian massacres, the parties signed a cease-fire agreement, known as the Bishkek Protocol, on May 4-5, 1994
- Although the protocol ended large-scale attacks and operations, the cease-fire has remained on paper for the past 26 years

Turkey's stand

- Muslim-majority Turkey backs Azerbaijan, and recently condemned Christian-majority Armenia for not resolving the issue through peaceful negotiations. Turkey declared unconditional support to Muslim-majority Azerbaijan.
- Russia and Turkey also back opposite sides in the civil wars playing out in Syria and Libya.
- Turkey's support for Azerbaijan may be seen as an attempt to counter Russia's influence in the region of South Caucasus.

Russia stand

- Russia's role is somewhat opaque since it supplies arms to both countries and is in a military alliance with Armenia called the Collective Security Treaty Organization.

Other countries


- US, have limited their participation to appeals for maintaining peace so far.
- For all countries, the region is an important transit route for the supply of oil and natural gas to the European Union.

What next?

- As of now, both sides are standing their ground.
- Azerbaijan maintained that for the fighting to stop, Armenia must unconditionally leave Nagorno-Karabakh.
- Armenian government has lodged a request with the European Court of Human Rights (ECHR) for an interim measure (applicable only when there is imminent risk of irreparable harm) against Azerbaijan.
- It requested the court to indicate to the Azerbaijani government to "cease the military attacks towards the civilian settlements along the entire line of contact of the armed forces of Armenia and Artsakh".

WHAT ARE PROPOSED SOLUTIONS OF PARTIES OVER UPPER KARABAKH, FROZEN PROBLEM OF CAUCASUS?


- The **UN Security Council** adopted four resolutions, including immediate evacuation of occupied territories by Armenia but Yerevan has not complied with these decisions
- The Azerbaijani side says it is a precondition that **Armenian soldiers withdraw from the regions** they have occupied to start the solution process
- Armenia wants this region to be **independent** from Azerbaijan



An initiative of **APTI PLUS**

Boost up your Mind and show your intelligence

APTI PLUS presents



**UPSC
PRELIMS
OPEN
QUIZ
CONTEST**

This is the ultimate test of your prelims preparation.
Battle with your peers to prove that you are the No. 1 Prelims Master!

**PARTICIPATE IN THE WEEKLY QUIZ &
WIN EXCITING PRIZES!!**

1ST PRIZE

**CASH
₹2000**

2ND PRIZE

**FREE CHECKING OF
20 MAINS ANSWER**

Starting from 18th October 2020

EASING OF LIQUIDITY

GS-III ECONOMY

Context

- The Reserve Bank of India (RBI) has announced measures to ease liquidity pressures amid rising yields on government securities and concerns of higher government borrowing.

Measures Announced by RBI

1. Special Open Market Operations:

- The OMOs via auctions involving the simultaneous purchase and sale of government securities for an aggregate amount of ₹20,000 crores in two tranches of ₹10,000 crores each, will be conducted.
- An **open market operation (OMO)** is an activity by a central bank to give (or take) liquidity in its currency to (or from) a bank or a group of banks.

2. Statutory liquidity ratio securities:

- The RBI also **allowed banks to hold fresh acquisitions of statutory liquidity ratio securities acquired from September 1, 2020, under Held-To-Maturity** up to an overall limit of 22% of net demand and time liabilities up to March 31, 2021.

3. Term Repo Operations:

- RBI said **it will conduct term repo operations for an aggregate amount of ₹1 lakh crore at floating rates (i.e., at the prevailing repo rate).**
- Through Term repo auctions of 7-day and 14-day tenors for a combined notified amount equivalent to 0.75 (at present) per cent of net demand and time liabilities (NDTL) of the banking system is conducted by the Reserve Bank through variable-rate auctions on every Friday, since the beginning of October 11, 2013.

Other Liquidity Measures by RBI

- Standing Liquidity Facilities:** The Reserve Bank provides Standing Liquidity Facilities to the Scheduled commercial banks (excluding RRBs) under the Export Credit Refinance Facility (ECR) and to the stand-alone Primary Dealers.
- Marginal Standing Facility:** The Reserve Bank, in 2011, introduced the Marginal Standing Facility (MSF) for banks and primary dealers to reduce the volatility in the inter-bank call money market.
- Repurchase Agreement (Repo):** Repo is a money market instrument combining elements of two different types of transactions viz., lending-borrowing and sale-purchase.
- Reverse Repo:** This is exactly the opposite of the Repo transaction and is used for absorption of liquidity. The Reverse Repo Rate at present is at 100 basis points below the repo rate.
- Liquidity Adjustment Facility:** As part of the financial sector reforms in 1998 the Committee on Banking Sector Reforms (Narasimham Committee II), Liquidity Adjustment Facility (LAF) was introduced under which the Reserve Bank would conduct auctions periodically, if not necessarily daily.

DECREASE IN GDP

GS-III ECONOMY

Context

- According to data released by the **National Statistical Office**, the **Gross Domestic Product (GDP) of India has shrunk by a record 23.9% in the April to June 2020 quarter in comparison to the same period** in 2019.
- GDP at Constant (2011-12) Prices in Q1 of 2020-21 is estimated at Rs 26.90 lakh crore, as against Rs 35.35 lakh crore in Q1 of 2019-20, showing a contraction of 23.9

Item	April-June (Q1)				Rates of GDP (%)	
	2018-19	2019-20	2020-21			
					2019-20	2020-21
1. Private Final Consumption Expenditure (PFCE)	18,89,008	19,92,967	14,61,164		56.4	54.3
2. Government Final Consumption Expenditure (GFCE)	3,93,709	4,18,249	4,86,636		11.8	18.1
3. Gross Fixed Capital Formation (GFCF)	10,82,670	11,32,195	5,99,192		32.0	22.3
4. Change in Stocks (CIS)	64,131	67,328	53,336		1.9	2.0
5. Valuables	41,080	51,347	4,645		1.5	0.2
6. Exports	6,86,695	7,08,546	5,67,961		20.0	21.1
7. Imports	8,08,933	8,25,788	4,92,286		23.4	18.3
8. Discrepancies	10,803	-9,576	8,908		-0.3	0.3
GDP	33,59,162	35,35,267	26,89,556		100.0	100.0
GDP (Percentage change over previous year)		5.2	-23.9			

percent as compared to 5.2 percent growth in Q1 2019-20.

Sector Wise Data

- The **worst affected** were **construction (-50%), trade, hotels and other services (-47%), manufacturing (-39%), and mining (-23%)**.
- Private consumption — the biggest engine driving the Indian economy — has fallen by 27%.
- The **second-biggest engine — investments by businesses — has fallen even harder — it is half of what it was last year same quarter**.
- Government's expenditure went up by 16% but this was nowhere near enough to compensate for the loss of demand (power) in other sectors (engines) of the economy.

CHART 1: INDIA'S GDP STORY SINCE ECONOMIC LIBERALISATION

From average growth of 7% to contraction of 7%

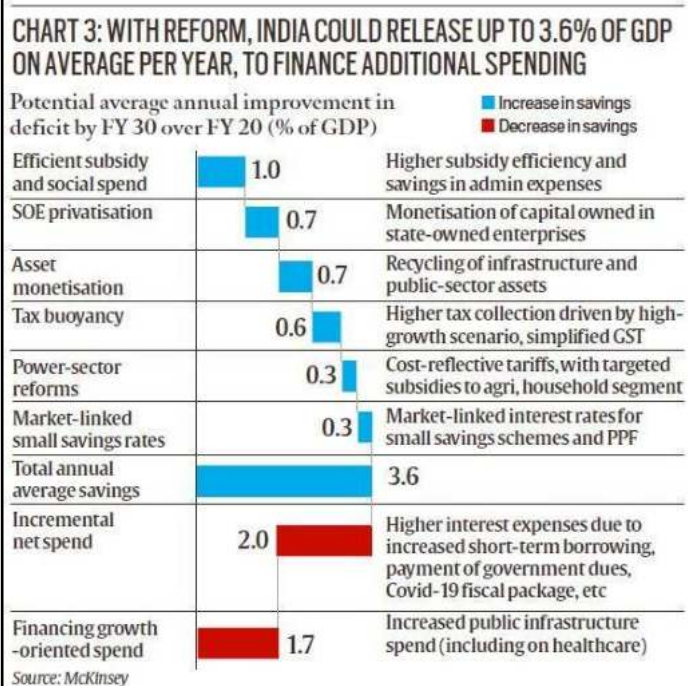


Reasons for GDP fall

- The GDP decline in **the April-June quarter (Q1)** is **primarily due to the pandemic**. India had the most intense **lockdown** starting from March 25.
- The **services sector — the dominant engine of growth in India — has been most affected by the need for social distancing** and the lockdown.
- Poor condition of the banking sector: Total NPA of the Indian banks is approximately Rs 7.9 lac crore, that is blocking the way of the new loan to the other borrowers.
- Agricultural crisis:** Farmers are not receiving a fair price for their crops.
- Decline in investment: There is a 79.5% reduction in the value of new projects declared during April to June 2019.
- Sharp decline in overall demand:** The Indian economy is suffering the difficulty of lower demand that ultimately caught the whole economy.

Implications

- Worst affected **areas are the sectors that create the maximum new jobs in the country**. Contraction in these areas would lead to more and more people either losing jobs (decline in employment) or failing to get one (rise in unemployment).
- When it does not grow, **say because of insufficient consumer demand, it reduces the average income of the businesses**.
- Reduction of the Per Capita Income
- A **fall in GDP affects the poor more**. Inequality **may** become more noticeable.
- A fall in per capita income reduces the tax revenues for the Government. This reduces the amount spent on public services including investment in infrastructure.
- To enhance the expenditure government raises the debt which increases** fiscal deficit.
- It also **has the crowding out effect on the Private Sector**.



Way Forward

- Under the circumstances, there is only one engine that can boost GDP and that is the government (G). Only when government spend more — either by building roads and bridges and paying salaries or by directly handing out money — can the economy revive in the short to medium term.

FISCAL DEFICIT

GS-III ECONOMY

Details

- India's fiscal deficit **in the four months to end July 2020 stood at 103.1% of the budgeted target for FY21.**
- Net tax receipts were ₹2.03 trillion**, while total expenditure was ₹10.5 trillion.
- Budget Targeted: 3.5% of GDP

About Fiscal Deficit

- Difference between the government's expenditure requirements and its receipts.**
- occurs when the government's expenditure exceeds its income.
- The **government describes fiscal deficit of India as "the excess of total disbursements from the Consolidated Fund of India**, excluding repayment of the debt, over total receipts into the Fund (excluding the debt receipts) during a financial year".
- This difference is calculated both in absolute terms and also as a percentage of the Gross Domestic Product (GDP) of the country.
- Fiscal Deficit = Total expenditure of the government (capital and revenue expenditure) – Total income of the government (Revenue receipts + recovery of loans + other receipts)**

Government Revenue Receipts	Government Capital Receipts	Government Expenditure
<ul style="list-style-type: none"> Corporation Tax Income Tax Custom Duties Union Excise Duties GST and taxes of Union territories 	<ul style="list-style-type: none"> Interest Receipts Dividends and Profits External Grants Other non-tax revenues Receipts of union territories 	<ul style="list-style-type: none"> Revenue Expenditure Capital Expenditure Interest Payments Grants-in-aid for creation of capital assets

Future Challenges

- Revenue Shortfall due to Pandemic**
- plans for additional borrowing that amounts to about 5.7% of GDP
- Failure to meet the disinvestment target envisaged** in the budget
- More Stimulus may be needed in the latter part of the year**

STATE EASE OF DOING BUSINESS

GS-III ECONOMY

Context

- The release of the States' ease of doing business rankings.

About the State ease of Doing Business

- Ranking of States based on the implementation of Business Reform Action Plan started in the year 2015.
- Till date, **State Rankings have been released for the years 2015, 2016 and 2017-18.**
- The Business Reform Action Plan 2018-19 includes 180 reform points covering 12 business regulatory areas** such as Access to Information, Single Window System, Labour, Environment, etc.
- The ranking this time gives full weightage to the feedback from over thirty thousand respondents at the ground level**, who gave their opinion about the effectiveness of the reforms.
- It is released by the the Department for Promotion of Industry and Internal Trade (DPIIT) under Ministry of Commerce & Industry.**

Objective & Methodology

- The objective of DPIIT's reform exercise is to provide a business-friendly environment, for which the regulations in a state have to be made simpler.

- DPIIT provides a set of recommendations meant to reduce the time and effort spent by businesses on compliance with regulation called the Business Reform Action Plan (BRAP).
- The reforms are grouped into 12 broad areas like land administration, labour regulation, obtaining electricity and water supply permits, environment regulation, etc.
- States are required to submit proof of implementing each reform on the DPIIT's EoDB portal and submit a list of users of these reforms.

Results

- **Andhra Pradesh secured the top spot for the third time since the ranking was first released in 2015 (Table 1).**
- UP jumped ten spots to number two and Telangana slipped to three.

TABLE 1: EASE OF DOING BUSINESS RANKS, TOP 10 IN 2019					TABLE 2: REFORMS, APPLICABLE/IMPLEMENTED			TABLE 3: SHARE (%) IN NEW INVESTMENTS ANNOUNCED		
State	2015	2016	2017	2019	State	Applicable	Implemented	State	2017-18	2018-19
Andhra Pradesh	2	1	1	1	Andhra	187	187	Andhra	6.56	16.29
Uttar Pradesh	10	14	12	2	UP	186	184	Haryana	3.37	15.74
Telangana	13	1	2	3	Telangana	186	184	Tamil Nadu	4.01	9.32
Madhya Pradesh	5	5	7	4	MP	187	187	Gujarat	6.76	7.74
Jharkhand	3	7	4	5	Jharkhand	187	186	Maharashtra	18.09	6.32
Chhattisgarh	4	4	6	6	Chhattisgarh	187	186	Karnataka	3.32	6.08
Himachal	17	17	16	7	Himachal	185	175	Rajasthan	2.01	3.04
Rajasthan	6	8	9	8	Rajasthan	186	183	MP	2.87	2.73
West Bengal	11	15	10	9	W Bengal	187	187	Odisha	8.25	2.43
Gujarat	1	3	5	10	Gujarat	187	187	NCT Delhi	1.38	1.76

Source: DPIIT

Criticism

- DPIIT'S methodology **does not consider the actual number of reforms implemented by the states.** States like **Haryana** and Gujarat have implemented all the reforms recommended by the DPIIT, but were ranked low on the EoDB list.
- **Non clarity over the representative sample of DPITT** for the feedback.
- **Business owners' expectations from the governments** can differ.
- These rankings do not consider the cost of doing business, which is what matters to businesses at the end of the day.

Conclusion

- It will help in improving the overall ranking in world bank's ease of doing business.
- This will act as guide for other states to undertake reforms.

Steps were taken by Government

- The **minimum capital requirement for public and private company has been eliminated under the Companies (Amendment) Act, 2015.**
- **Introduced a single form SPICe (Simplified Proforma for Incorporating Company electronically) by merging five different applications in it i.e.** Name reservation, Company incorporation, Director Identification Number (DIN), Permanent Account Number (PAN) and the Tax Deduction/Collection Account Number (TAN).
- The **requirement to issue a physical PAN card has been eliminated. Additionally, PAN and TAN are mentioned in the Certificate of Incorporation (CoI) which is considered as a sufficient proof for PAN and TAN.**
- **Online and common registration for EPFO & ESIC is provided on ShramSuvudha Portal.**
- **Unified building bye-laws 2016 have been introduced in Delhi.**
- Multiple inspections at completion stage have been replaced by single joint inspection in Delhi.
- Road cutting and restoration for water and sewer connections have been simplified.
- **Secured creditors are paid first during business liquidation, and hence have priority over other claims such as labor and tax.**
- **17 indirect Central and State taxes have been replaced with a single indirect tax, Goods and Service Tax (GST), for the entire country.** The previous sales taxes including the central sales tax, CENVAT, state VAT and the service tax have been merged into the GST
- **National Judicial Data Grid has been introduced which makes it possible to generate case measurement report on local courts.**

- **Insolvency and Bankruptcy Code 2016** has been adopted that introduced a reorganization procedure for corporate debtors and facilitated continuation of the debtors' business during insolvency proceedings.

STARTUP RANKING EXERCISE

GS-III ECONOMY

Context

- The Department for Promotion of Industry and Internal Trade (DPIIT) conducted the second edition of the States' Startup Ranking Exercise.

Objective of the Ranking

- to **foster competitiveness and propel States and Union Territories to work proactively towards uplifting the startup ecosystem.**
- A **capacity development exercises to encourage mutual learning among all states and to provide support in policy formulation and implementation.**

Parameters of Ranking

- **The States' Startup Ranking Framework 2019** has 7 broad reform area, consisting of 30 action points.
 - Institutional Support,
 - Easing Compliances,
 - Relaxation in Public Procurement norms,
 - Incubation support,
 - Seed Funding Support,
 - Venture Funding Support,
 - Awareness & Outreach

Methodology

- To **establish uniformity and ensure standardization in the ranking process**, States and UTs have been divided into two groups.
- **Evaluation Committees comprising independent experts carried out** a detailed assessment of responses across various parameters.
- For the purposes of Ranking, States are classified into 5 Categories: **Best Performers, Top Performers, Leaders, Aspiring Leaders and Emerging Startup Ecosystems.**



DIVERSION OF CESS OF GST

GS-III ECONOMY

Context

- The **CAG** has found that the Union government in the very first two years of the GST implementation wrongly retained Rs 47,272 crore of GST compensation cess that was meant to be used specifically to compensate states for loss of revenue.

CAG Comment

- It flagged that the amount was to be credited to the non-lapsable GST Compensation Cess collection fund for payment to states for loss of revenue due to implementation of GST since 2017, but the government did not do so, and thus violated the GST law.
- The GST Compensation Cess Act, 2017 provides for levy of cess to provide compensation to the states for loss of revenue arising due to implementation of GST for a period specified in the Act.
- CAG said out of the Rs 62,612 crore GST Compensation Cess collected in 2017-18, Rs 56,146 crore was transferred to the non-lapsable fund.
- In the following year (2018-19), Rs 54,275 crore out of Rs 95,081 crore collected was transferred to the fund.

Impact of it

- It led to overstatement of revenue receipts and understatement of fiscal deficit for the year.
- The wrongful operation has implications on the reporting of Grants in aid since the GST Compensation Cess is the right of the states and is not a Grant in aid.
- It points out to lack of transparency and disclosures in the financial management of central government.

Process of Cess collection and compensation

- The collected compensation cess flows into the CFI, and is then transferred to the Public Account of India, where a GST compensation cess account has been created.
- States are compensated bi-monthly from the accumulated funds in this account.

Legal Requirement

- The **GST (Compensation to States) Act guarantees all states an annual growth rate of 14 per cent in their GST revenue in the first five years** of implementation of GST beginning July 2017.
- If a **state's revenue grows slower than 14 per cent, it is supposed to be compensated by the Centre using the funds specifically collected** as compensation cess.
- To provide these grants, a GST compensation cess is levied on certain luxury and sin goods.

Comments on CESS

- Union government **withheld in the Consolidated Fund of India (CFI) more than ₹1.1 lakh crore out of the almost ₹2.75 lakh crore collected through** various cesses in 2018-19.
- Found that **over ₹1.24 lakh crore collected as Cess on Crude Oil over the last decade had not been transferred to the designated Reserve Fund— the Oil Industry Development Board — and had instead been retained in the Centre's coffers.**

About CESS

- A cess is an earmarked tax that is collected for a specific purpose and ought to be spent only for that.
- Every cess is collected after Parliament has authorised its creation through an enabling legislation that specifies the purpose for which the funds are being raised.
- Article 270 of the Constitution allows cess to be excluded from the purview of the divisible pool of taxes that the Union government must share with the States.

CESS levied by Government

- A report **titled Cess and Surcharges: Concept, Practice and Reforms since 1944, prepared by the Vidhi Centre for Legal Policy in August 2018 pointed to 42 cesses that have been levied at various points in time since 1944.**
- Post Independence, the cess taxes were linked initially to the development of a particular industry, including a salt cess and a tea cess in 1953.
- The **introduction of the GST in 2017 led to most cesses being done away with and as of August 2018, there were only seven cesses that continued to be levied.**

Role of CESS

- As the Vidhi Centre for Legal Policy report observed, the share of revenue to the Centre's annual tax kitty from cess had risen to 11.88% of the estimated gross tax receipts in 2018-19, from 6.88% in 2012-13.

About CAG

Nature of Body	Constitutional
Appointment	by the President by warrant under his hand and seal (Article 148)
Removal	Like the Judge of Supreme Court (Article 148)
Oath	Mentioned in the Third Schedule
Reappointment	Not Eligible
Salary	Determined by the Parliament
Points of Independence	<ul style="list-style-type: none"> • The administrative expenses of the office of the CAG including all salaries, allowances and pensions shall be charged upon the Consolidated Fund of India. • Salary and Pension cant be varied to his disadvantage after his appointment.
Article 150 (Form of Accounts of The Union and of The	<ul style="list-style-type: none"> • The accounts of the Union and of the States shall be kept in such form as the President may, on the advice of the Comptroller and Auditor-General of India,

States)	prescribe.
Article (151) (Audit Reports)	<ul style="list-style-type: none"> The reports of the Comptroller and Auditor-General of India relating to the accounts of the Union shall be submitted to the president, who shall cause them to be laid before each House of Parliament. The reports of the Comptroller and Auditor-General of India relating to the accounts of a State shall be submitted to the Governor of the State, who shall cause them to be laid before the Legislature of the State.
Powers under Schedule 6	<ul style="list-style-type: none"> The accounts of the District Council or, as the case may be, the Regional Council shall be kept in such form as the Comptroller and Auditor General of India may, with the approval of the President, prescribe.

FARM BILLS

GS-III ECONOMY

The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Bill, 2020

Main provisions –

- The new legislation **will create an ecosystem where the farmers and traders will enjoy freedom of choice of sale and purchase of agri-produce.**
- It will also **promote barrier-free inter-state and intra-state trade and commerce outside the physical premises** of markets notified under State Agricultural Produce Marketing legislations.
- The farmers **will not be charged any cess or levy for sale of their produce and will not have to bear transport costs.**
- The Bill also **proposes an electronic trading in transaction platform for ensuring a seamless trade electronically.**
- In **addition to mandis, freedom to do trading at farmgate, cold storage, warehouse, processing units etc.**
- Farmers will be able to engage in direct marketing thereby eliminating intermediaries resulting in full realization of price.

Doubts –

- Procurement at Minimum Support Price will stop**
- If farm produce is sold outside APMC mandis, these will stop functioning**
- What will be the future of government electronic trading portal like e-NAM

Clarification –

- Procurement at Minimum Support Price will continue, farmers can** sell their produce at MSP rates, the MSP for Rabi season will be announced next week
- Mandis will not stop functioning, trading will continue here as before.** Under the new system, farmers will have the option to sell their produce at other places in addition to the mandis
- The e-NAM trading system will also continue in the mandis**
- Trading in farm produce will increase on electronic platforms. It will result in greater transparency and time saving

The Farmers (Empowerment and Protection) Agreement of Price Assurance and Farm Services Bill, 2020

Main provisions –

- The new legislation will empower farmers for engaging with processors, wholesalers, aggregators, wholesalers, large retailers, exporters etc.,** on a level playing field. Price assurance to farmers even before sowing of crops. In case of higher market price, farmers will be entitled to this price over and above the minimum price.
- It will transfer the risk of market unpredictability from the farmer to the sponsor. Due to prior price determination, farmers will be shielded from the rise and fall of market prices.**
- It will **also enable the farmer to access modern technology, better seed and other inputs.**
- It will **reduce cost of marketing and improve income of farmers.**
- Effective dispute resolution mechanism has been provided for with clear time lines for redressal.
- Impetus to research and new technology in agriculture sector.

Doubts –

- Under contract farming, farmers will be under pressure and they will not be able to determine prices**
- How **will small farmers be able to practice contract farming, sponsors will shy away from them**
- The new system **will be a problem for farmers**
- In case of dispute, big companies will be at an advantage

Clarification –

- The farmer **will have full power in the contract to fix a sale price of his choice for the produce. They will receive payment within maximum 3 days.**

- **10000 Farmer Producer organizations are being formed throughout the country.** These FPOs will bring together small farmers and work to ensure remunerative pricing for farm produce
- **After signing contract, farmer will not have to seek out traders. The purchasing consumer will pick up the produce directly from the farm**
- In case of **dispute, there will be no need to go to court repeatedly. There will be local dispute redressal mechanism.**

The Essential Commodities (Amendment) Bill, 2020

About Essential Commodity Act-1955

- It **empowers the central government to designate certain commodities (such as food items, fertilizers, and petroleum products)** as essential commodities.
- The **central government may regulate or prohibit the production, supply, distribution, trade, and commerce of such essential commodities.**

Provisions of the amendment

- **Regulation of food items:** Bill provides that the central government may regulate the supply of certain food items including cereals, pulses, potatoes, onions, edible oilseeds, and oils, only under extraordinary circumstances. These include: (i) war, (ii) famine, (iii) extraordinary price rise and (iv) natural calamity of grave nature.
- **Stock limit:** The Bill requires that imposition of any stock limit on agricultural produce must be based on price rise.
- **A stock limit may be imposed only if there is: (i) a 100% increase in retail price of horticultural produce; and (ii) a 50% increase in the retail price of non-perishable agricultural food items.**
- The increase will be calculated over the price prevailing immediately preceding twelve months, or the average retail price of the last five years, whichever is lower.

Objective

- **remove fears of private investors of excessive regulatory interference in their business operations.**
- **The freedom to produce, hold, move, distribute and supply will lead to harnessing of economies of scale**
- **It will attract private sector/foreign direct investment into agriculture sector. It will help drive up investment in cold storages and modernization of food supply chain.**

Other Criticism

- It is **feared by the farmers that encouraging tax-free private trade outside the APMC mandis will make these notified markets unviable**, which could lead to a reduction in government procurement itself.
- Farmers are **also demanding that MSPs be made universal, within mandis and outside, so that all buyers government or private will have to use these rates as a floor price below which sales cannot be made.**
- One of the **major concerns raised is that, since agriculture falls in the State list, Centre should not be making legislation on this subject.**
- They are **concerned about the loss of revenue from mandi taxes and fees.**
- Although corporates will bring much-needed investment, they could also distort the playing field, as small farmers might not be able to match them in bargaining power.
- Bihar had abolished the APMC laws back in 2006 ,but it didn't lead to investment in infrastructure or technology at local mandis. Rather, it made farmers more dependent on the local traders.

Conclusion

- New **Laws are as per the requirement of time. It will change the functioning of agricultural market and make farmers Atmanirbhar.**
- Government must work to enhance competition among private players so that farmers could benefit from the prices.

Context

- The timeline for the second phase of BharatNet project has been extended from August 2021.

Objective of the Project

- It was **launched in 2011 to provide connectivity to 2.5 lakh Gram Panchayats (GPs) through optical fibre.**
- It is a **highly scalable network infrastructure accessible on a non-discriminatory basis, to provide on demand, affordable broadband connectivity of 2 Mbps to 20 Mbps for all households.**
- It aims to **realise the vision of Digital India, in partnership with States and the private sector.**

- The objective is to facilitate the delivery of e-governance, e-health, e-education, e-banking, Internet and other services to the rural India.
- The entire **project is being funded by Universal Service Obligation Fund (USOF).**

Implementation

- The project is a Centre-State collaborative project, with the States contributing free Rights of Way for establishing the Optical Fibre Network.
- It involves **completion in three phases.**
- The first **phase envisages providing one lakh gram panchayats with broadband connectivity** by laying underground optic fibre cable (OFC) lines by December 2017.
- The **second phase will provide connectivity to all 2,50,500 gram panchayats in the country using an optimal mix of underground fibre**, fibre over power lines, radio and satellite media.
- Second Phase involves laying of OFC over electricity poles.
- In the third phase from 2019 to 2023, state-of-the-art, future-proof network, including fibre between districts and blocks, with ring topology to provide redundancy would be created.

Progress of Implementation of Bharat Net

Findings of Parliamentary Committee (Observations and Recommendations)	
Implementation of Phase-1	<ul style="list-style-type: none"> Started only after 2014 rather than 2011 as envisaged. Deficiencies in various aspects such as planning, design, procurement Non-participation of states Target of completing one lakh GPs had been achieved on December 28, 2017.
Last Mile Connectivity	<ul style="list-style-type: none"> Not a part of Phase-1 focus should be on provision of last-mile connectivity in connected Gram Panchayat(GPs). The need to set up Wi-Fi hotspots under Saansad Adarsh Gram Yojana. Emphasis should be given to participation of village level entrepreneurs, so as to generate employment.
Implementation of Phase-II	<ul style="list-style-type: none"> Under Phase-II of BharatNet, a target of covering the remaining 1,50,000 GPs by March 2019 has been set.(Already delayed) in Phase-II emphasis should be given to employment generation, particularly in states like Jammu and Kashmir, Himachal Pradesh, Uttarakhand, and North-eastern states.
Participation of states	<ul style="list-style-type: none"> In Phase-1, a modified strategy was adopted where GPs in eight states were provided connectivity through state-led model. Under this model, states undertake the responsibility of laying of optical fibre cable and radio. The Committee stated that a mechanism should be put in place whereby best practices adopted in one state can be shared with all other states.
Central Public Sector Undertakings (CPSUs)	<ul style="list-style-type: none"> Phase-I of the project had been allotted to three CPSUs (Bharat Sanchar Nigam Limited, RailTel, and Power Grid Corporation of India Limited). Despite having expertise in optical fibre technology, performance of these CPSUs has not been satisfactory. The Committee recommended in this regard that stringent measures, such as penalties for failure to achieve the targets, should be imposed on the CPSUs.
Private Sector Participation	<ul style="list-style-type: none"> There is high private sector participation in implementation of Phase-II. Two projects will be implemented under private sector-led model in Bihar and Punjab. The Committee recommended that there should not be any scope for laxity by private participants in timely execution of projects. Further, penalty clauses should be included in agreements with them.
Right of way (RoW) issues	<ul style="list-style-type: none"> Indian Telegraph Right of Way Rules, 2016 have been framed to ensure grant of RoW permissions in underground and over ground infrastructure. However, as of May 1, 2018, 296 RoW cases are pending with different agencies, which affect 1,241 GPs. There should be Single Window clearance system to ensure smooth implementation.

BharatNet Phase-III	<ul style="list-style-type: none"> • Phase-III of the BharatNet involves upgrading the network to meet future requirements. • However, the Committee observed that Phase-III has not been approved by the Union Cabinet. • Given the size of Phase-III, the Committee recommended that all necessary planning and implementation strategy should be worked out in advance. • Further, it recommended that Department of Telecommunications should take necessary steps for getting approval of the competent authority at the earliest.
----------------------------	---

FISHERY SECTOR

GS-III ECONOMY

Context

- Recently, Government **launched Rs 20,050 crore- Pradhan Mantri Matsya Sampada Yojana (PMMSY) to boost production and exports** in the fisheries sector as part of the government's aim to double farmers' income.

Objective of the Scheme

- It **aims at augmenting fish production and productivity at a sustained average annual growth rate of about 9%** to achieve a target of 22 million tonnes by FY25 through sustainable and responsible fishing practices.
- The **scheme will also help improve the availability of certified quality fish seed and feed, traceability in fish** and including effective aquatic health management.
- **Creation of critical infrastructure including modernisation and strengthening of value chain** will also be a major focus under it.
- The **total investment will comprise of Centre's share of Rs 9,407 crore, states' share of Rs 4,880 crore and beneficiaries' share of Rs 5,763 crore.**
- The scheme, to be **implemented between FY21 to FY25, targets creating additional direct employment of 15 lakh fishers**, fish farmers, fish workers, fish vendors in fishing and allied activities and 45 lakh indirect employment.
- Under **social security, accidental insurance of fishers should be enhanced from Rs 2 lakh to Rs 5 lakh.**

Implementation

- The **PMMSY will be implemented with two separate components — Central Sector Scheme (100% grant by Centre)** and Centrally Sponsored Scheme (60:40 between Centre and State).
- Any **project approved under the Centrally Sponsored Scheme, the beneficiary will have to invest 60% while the Centre** and the state together will contribute 40% remaining costs.
- In case of **SC/ST/woman beneficiary, the government's grant will be 60%.**
- **Fish markets —both wholesale and retail —**need to be modernised and Safal-type (Mother Dairy's fruits and vegetable stores) retail outlets could be opened up in cities.
- about **42% of the total estimated investment of the PMMSY is earmarked for creation and upgradation of fisheries infrastructure facilities.**
- Focus **areas include Fishing Harbours and Landing Centers, Post-harvest and Cold Chain Infrastructure, Fish Markets and Marketing Infrastructure, Integrated Modern Coastal Fishing Villages and Development of Deep-sea Fishing.**
- The **scheme plans to reduce post-harvest losses from the present high of 25% to about 10% by modernizing and strengthening value chain.**
- Under the **Swath Sagar plan, activities envisaged with a view to modernize the fisheries sector include promotion of Bio-toilets**, Insurance coverage for fishing vessels, Fisheries Management Plans, E-Trading/Marketing, Fishers and resources survey and creation of National IT-based databases.

Other Government Steps

- **Creation of a separate Ministry of Fisheries, Animal Husbandry and Dairying in the Union Government,**
- **Setting up a new and dedicated Department of Fisheries with independent administrative structure,**
- **Implementation of the Centrally Sponsored Scheme on Blue Revolution: Integrated Development and Management of Fisheries during the period 2015-16 to 2019-20 with a central outlay of Rs. 3,000 crore,**
- **Creation of Fisheries and Aquaculture Infrastructure Development Fund (FIDF) during 2018-19 with a fund size of Rs. 7,522.48 crore.**
- The **Marine Products Export Development Authority (MPEDA) also provides financial assistance to develop fisheries infrastructure facilities to maintain the quality standards of aquaculture products for export to overseas markets.**

- The **introduction of cage culture in reservoirs and other open water bodies has led to an increase in output**. This new practice gives freedom to fishermen from the risk of traversing dangerous rivers and restricted reservoirs.
- **Regular stocking of reservoirs and other water bodies has resulted in a marked increase in catch**.

Fishery Sector in India

- **India is the world's second-largest fish producer with exports worth more than Rs 47,000 crore.**
- **Fisheries are the country's single-largest agriculture export, with a growth rate of 6 to 10 per cent** in the past five years.
- Fisheries alone have employed 145 million people and contributed to 1.07% of the GDP .

Importance of Fishery Sector

- Indian fisheries and **aquaculture is an important sector of food** production.
- It **provides nutritional security to the food basket, contributing to the agricultural exports and engaging** about fourteen million people in different activities.
- With **diverse resources ranging from deep seas to lakes in the mountains and more than 10% of the global biodiversity in terms of fish and shellfish species, the country has shown continuous and** sustained increments in fish production since independence.
- It helps in **generating new source of employment in rural area including part time employment** of farmer.
- **Arrests migration of people from** rural to urban areas.
- **Produces food near consumer centre in rural area** thus contributing to improvement of human nutrition.
- Earns foreign exchange through export or saving foreign exchange through import substitution.

Challenges

- Tariff barriers: **Value added products attract higher tariff levels. This perpetuates the dominance of Developed** countries in the production and marketing of value-added products.
- **Increased dominance of supermarkets in retail trade in fish and value-added products Entry barriers** create difficulty in accessing supermarkets.
- **High costs of market promotion**
- Sanitary and phytol –sanitary barriers in accessing the developed country markets.
- Problems based on shipping: Through operational discharge and accidental spills on that time ships release oils and toxic chemicals into the ocean leading to destruction of fishes.
- **Environmental issues affecting the growth of Fishes:**
 - **Oil Spill**
 - **Solid Waste Disposal**
 - **Sewage Disposal**
- Due to the poverty of fishermen they not able to use the latest technology
- Poor infrastructure and lack of cold storage facility in their boats
- **Due to the lack of training, the quality of fish feed** is getting poor nowadays.
- **Most important challenge faced by every fisherman is boundary problems. Without latest equipment** like GPRS they don't know about miles or kilometers into the sea

Way Forward

- **South Indian Federation of Fishermen Societies, working in the marine fisheries sector, can help** bring the necessary reforms to marine fisheries since it follows an AMUL-like cooperative model with a three-tier federal structure.
- **Government made two important announcements for strengthening fisheries extension by mobilising 3,477 'Sagar Mitras'** and promoting 500 fish farmer producer organisations. Therefore, it is important to draw insights from states that have catalysed livelihood promotion of small-scale fishermen.
- **Skilling is important to subsistence of marginalised fishermen. In FY17, about 121,560 fishermen** had undergone skill development training with an allocated budget of Rs 2.36 crores.

MINIMUM SUPPORT PRICE

GS-III ECONOMY

Context

- Government has declared the Minimum Support Price for the Rabi crops.

About it

- It is only a **government policy that is part of administrative decision-making**. The government declares MSPs for crops, but there's no law mandating their implementation.
- The government can procure at the MSPs if it wants to.
- There is no legal compulsion. Nor can it force others (private traders, organised retailers, processors or exporters) to pay.**
- The only crop where MSP payment has some statutory element is sugarcane.
- This is **due to its pricing being governed by the Sugarcane (Control) Order, 1966** issued under the Essential Commodities Act.
- That **order, in turn, provides for the fixation of a 'fair and remunerative price' (FRP) for cane during every sugar year (October-September)**.
- The responsibility to make FRP payment to farmers within 14 days of cane purchase lies solely with the sugar mills.

WHAT'S MSP

It is a "minimum price" for any crop that the government considers as remunerative for farmers and hence deserving of "support". It's also the price that government agencies pay whenever they procure the particular crop. The government now fixes MSPs for 23 crops, but is NOT legally bound to pay these even if open market rates for the said produce are ruling below their announced floor prices

Determination of MSP

- The **Centre currently fixes MSPs for 23 farm commodities**
 - 7 cereals (paddy, wheat, maize, bajra, jowar, ragi and barley),
 - 5 pulses (chana, arhar/tur, urad, moong and masur),
 - 7 oilseeds (rapeseed-mustard, groundnut, soyabean, sunflower, sesamum, safflower and nigerseed)
 - 4 commercial crops (cotton, sugarcane, copra and raw jute) — based on the CACP's recommendations.
- The **CACP considers various factors such as the cost of cultivation and production, productivity of crops, and market prices** for the determination of MSPs.

About CACP

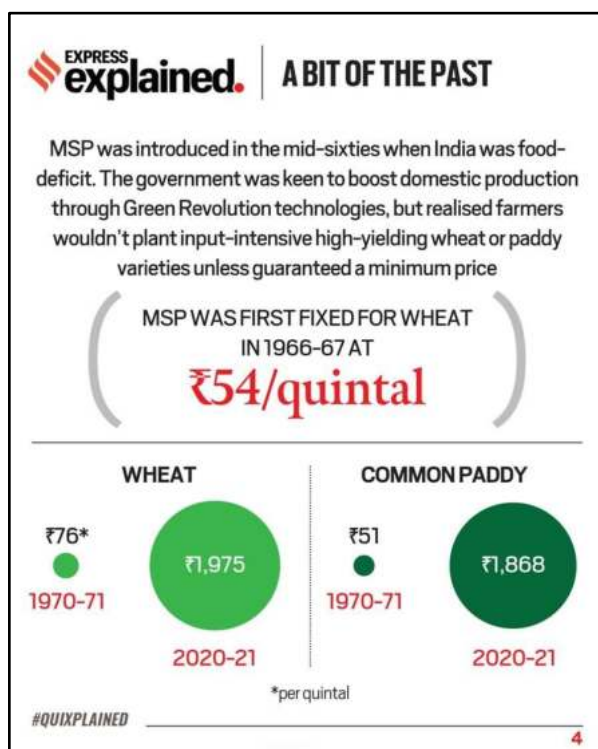
- But the **CACP itself is not any statutory body** set up through an Act of Parliament.
- The CACP, as its website states, is just "an attached office of the Ministry of Agriculture and Farmers Welfare, Government of India".
- It **can recommend MSPs, but the decision on fixing (or even not fixing) and enforcement rest finally with the government.**

Importance of the MSP

- It **provides insurance against the fluctuating prices in the market thus providing fixed remuneration to the farmers.**
- Disclosure of MSP before the sowing seasons help farmers to make an informed decision. It also helps the government to shift the production towards the necessary crop.**
- More and **more crops are being added under MSP regime thus allowing cultivation of diverse crop. It helps in making our food** basked more diverse and nutrient-rich.
- It **protects farmers from the vagaries of private traders** as they can sell it to the government.

Issues about the MSP

- Public procurement is limited to a few crops such as paddy, wheat and, to a limited extent, pulses.**
- The **procurement is also limited to a few states. Three states which produce 49% of the national wheat output account for 93% of procurement.**
- Due to **limitations on the procurement side (both crop-wise and state-wise)**, all farmers do not receive benefits of increase in MSPs.



- **Higher procurement of paddy and wheat, as compared to other crops at MSPs tilts the production cycle towards these crops.**
- The **MSP fixed for each crop is uniform for the entire country.** However, the production cost of crops varies across states.
- Higher **purchase of Paddy and wheat has led to monoculture** in India. It is also a sign towards export of water in a water-stressed country.
- Paddy **cultivation in the Punjab –Haryana region due to purchase at MSP has led to declining groundwater and poor soil condition.**
- **Continuous purchase at MSP without proper framework of disbursing it has led to overflow of the stocks in government godowns.**
- It has **led to enhanced wastage of food.**
- It distorts free market by favouring some crops over others.

Way Forward

1. **Pradhan Mantri Annadata Aay Sanrakshana Abhiyan' (PM-AASHA):** It is comprised of
 - **Price Support Scheme (PSS):** physical procurement of pulses, oilseeds and Copra will be done by Central Nodal Agencies with proactive role of State governments.
 - It is also decided that in addition to NAFED, Food Cooperation of India (FCI) will take up PSS operations in states /districts.
 - **Price Deficiency Payment Scheme (PDPS):** It is proposed to cover all oilseeds for which MSP is notified.
 - In this direct payment of the difference between the MSP and the selling/modal price will be made to pre-registered farmers selling his produce in the notified market yard through a transparent auction process.
 - All payment will be done directly into a registered bank account of the farmer.
 - **Pilot of Private Procurement & Stockist Scheme (PPPS):** It will seek the participation of private sector in procurement operation needs to be piloted so that based on learnings the ambit of private participation in procurement operations may be increased.
 - Implementation of E-NAM for enhancement of the trading

HOW ARE MSPs DETERMINED?

The Centre fixes MSPs for every kharif and rabi cropping season based on recommendations of the Commission for Agricultural Costs and Prices (CACP)

● When a farmer grows a crop, he incurs costs, some of it explicit and some implicit or unpaid. The CACP considers the following costs:

1	2	3
A2	A2+FL	C2
Covers all cash and in kind expenses incurred by farmers on seeds, fertilisers, chemicals, hired labour, fuel, irrigation, etc	Actual costs plus an imputed value of unpaid family labour	Includes 'A2+FL' along with revenues forgone on owned land (rent) and fixed capital assets (interest)

#QUIXPLAINED

www.iasgyan.in

An initiative of **APTI PLUS**

UPSC CSE TEST SERIES PROGRAM

XYZ IAS

Prelims Test Package:
₹16000

Mains Test Package:
₹30000

IASGYAN

PRELIMS TEST PACKAGE:
60 TESTS
~~₹4999~~ ₹2499

MAINS TEST PACKAGE:
16 TESTS
~~₹18000~~ ₹12000

WORLD'S LARGEST SOLAR TREE

GS-III SCIENCE & TECHNOLOGY

Context

- Recently, CSIR-CMERI developed the World's Largest Solar Tree.

Solar Tree

- A solar tree is a structure where solar modules are planted on a single pillar, which looks like a tree trunk.
- It serves the dual purpose of being an artwork and an energy generator.

About

- The installed capacity of the Solar Tree is **above 11.5 kWp (kilowatts peak)**.
- It has the annual capacity to generate 12,000-14,000 units of Clean and Green Power.
- The Solar Tree has been designed in a manner to ensure maximum exposure of each Solar PV Panel to Sunlight and also creation of the least amount of shadow area beneath.
- There are a total of 35 Solar PV Panels in each tree with a capacity of 330 wp (watt peak) each.



Features & Applications

- The solar trees can be aligned with agriculture for substituting price-volatile fossil fuels.
- Each solar tree has the **potential to save 10-12 tons of carbon emissions** when compared with fossil fuel, and the surplus power generated can be fed to the power grid.
- The solar tree has capabilities to adapt a bevy of Internet of Things (IoT)-based features, such as round-the-clock CCTV surveillance in agricultural fields, real-time humidity, wind speed, rainfall prediction, and soil analytics sensors.
- The Government envisages for developing a renewable energy-based grid.
- In this line interested MSMEs (micro, small, and medium enterprises) can align their business models towards Solar Tree concept and work with regards to **PM KUSUM** program for farmers.
- PM KUSUM stands for **Pradhan Mantri Kisan Urja Suraksha evam Utthan Mahabhiyan**.
- The program is expected to help Indian farmers by providing them financial and water security through the mobilization of solar projects and solar-powered water pumps.
- The program aims to add a solar capacity of **25,750 MW by 2022**.
- The solar tree can also be connected to CSIR-CMERI's solar-powered e-suvidha kiosks for real-time access to the massive agricultural database, as well as to the eNAM (National Agricultural Marketplace) for instant and real-time access to a unified online market.

Key takeaways

- The solar tree has been developed at Rs. 7.5 lakh.
- The solar trees use less space and produce more energy per unit area. However, the cost of solar tree panels is double to that of the solar rooftop panels.
- They can be installed in agricultural farms as an alternative to diesel to run pumps, e-tractors, etc.,
- The extra generated energy can be fed to an Energy Grid.
- It can be lined up with the existing Pradhan Mantri Kisan Urja Suraksha even Utthan Mahabhiyan (PM KUSUM) Scheme.

PM KUSUM Scheme

- Ministry of New and Renewable Energy (MNRE)** has launched the Pradhan Mantri Kisan Urja Suraksha evam Utthan Mahabhiyan (PM KUSUM) Scheme for farmers for installation of solar pumps and grid connected solar and other renewable power plants in the country.
- The scheme aims to **add solar and other renewable capacity of 25,750 MW by 2022** with total central financial support of Rs. 34,422 Crore including service charges to the implementing agencies.
- The Central Mechanical Engineering Research Institute (also known as CSIR-CMERI Durgapur) is a public engineering research and development institution in Durgapur, West Bengal. It is a constituent laboratory of the Indian Council of Scientific and Industrial Research (CSIR). This institute is the only national level research institute in the field of mechanical engineering in India.

How do solar panels work to generate electricity?

- A standard solar panel (also known as a solar module) consists of a layer of silicon cells, a metal frame, a glass casing, and various wiring to allow current to flow from the silicon cells.
- Silicon is a nonmetal with conductive properties that allow it to absorb and convert sunlight into electricity.**
- When light interacts with a silicon cell, it causes electrons to be set into motion, which initiates a flow of electric current. This is known as the "photovoltaic effect," and it describes the general functionality of solar panel technology.
- The photovoltaic effect was first discovered in 1839 by Edmond Becquerel.

kWp

- Solar electricity systems are given a rating in kilowatts peak (kWp).
- This is the rate at which it generates energy at peak performance for example at noon on a sunny day.

Wp

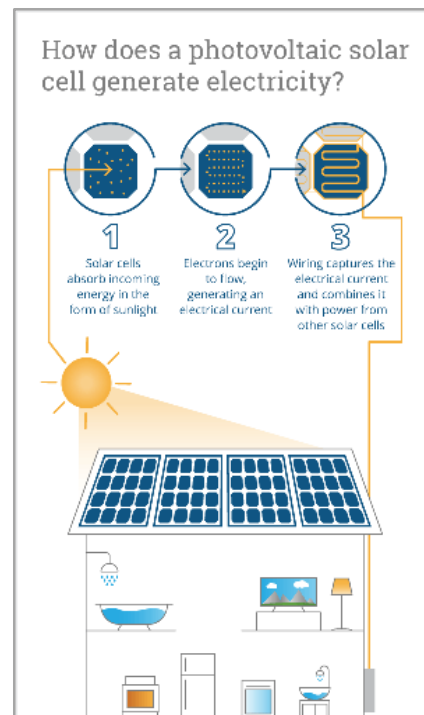
- The capacity of a solar installation is expressed in watt peak (Wp).
- This is the maximum electrical capacity that a solar cell can yield under ideal circumstances: solar collector directed towards the sun in a cloudless sky.

kWpvsWp

- KWp is the **nameplate rating of Solar PV modules** and kW is **the actual power delivered to the load**.
- For instance, a 0.3kWp (300Wp nameplate) module under ideal conditions (25 degrees C and 1000 watts per sq. metre radiation) will give an output of 0.3kW.
- However, in real life weather conditions, the output will be lower than the nameplate rating which is denoted in kW.

India & Solar power

- The country's solar installed capacity was 35,739 MW as of 31 August 2020.
- The government had an initial target of 20 GW capacity for 2022, which was achieved four years ahead of schedule.
- In 2015 the target was raised to **100 GW of solar capacity** (including 40 GW from rooftop solar) **by 2022**.
- India has established nearly 42 solar parks to make land available to the promoters of solar plants.
- Rooftop solar power accounts for 2.1 GW, of which 70% is industrial or commercial.
- The **International Solar Alliance (ISA)**, proposed by India as a founder member, is headquartered in India.
- India has also put forward the concept of "**One Sun One World one Grid**" and "**World Solar Bank**" to harness abundant solar power on global scale.
- Karnataka tops the list of states with the highest installed solar power generation capacity in the country.**
- India stands **5th globally in terms of installed renewable energy capacity**.
- India's total solar power capacity alone has increased by more than 11 times since the last five years.
- From 2014 to June 2020, the solar power capacity of India has increased from 2.6 Giga Watts (GW) to 38 GW.



BRAIN ATLAS

GS-III SCIENCE & TECHNOLOGY

Context

- Recently, NIMHANS developed new Indian Brain Templates, brain atlas.

Details

- The neuroscientists studied over 500 brain scans of Indian patients to develop
 - ✓ five sets of Indian brain templates and
 - ✓ a brain atlas for five age groups covering late childhood to late adulthood (six to 60 years).

Need for a new Atlas

- We currently use the **Montreal Neurological Index (MNI) template**. It is based on Caucasian brains.
- The MNI template was made by averaging 152 healthy brain scans from just a small slice of the city's population in North America.

- But Caucasian brains are different from Asian brains. While some countries have their own scale to measure the brain, we are still dependent on the Caucasian brain template.
- What we have developed now is a scale that will measure an Indian brain.

Significance

- The templates and atlas will provide more **precise reference maps for individual patients with neurological disorders** like strokes, brain tumours, and dementia.
- These templates and atlas **will also help pool information in group studies of the human brain and psychological functions.**
- It will aid in our understanding of psychiatric illnesses like Attention Deficit Hyperactivity Disorder (ADHD), autism, substance dependence, schizophrenia, and mood disorders.
- When most brain scans (MRI) are taken, they need to be compared to a standard brain template — a model or standard for making comparisons.
- This **helps researchers identify parts of the brain.** A challenge for researchers is that brain size and shape differs across ages, and across regions and ethnicities, and even greatly within any population.
- The vast majority of these differences is structural and is not associated with intelligence or behavior.
- But they do present a practical challenge of matching up similar regions in brain across populations, which is necessary for accurate measurements.
- These new population- and age-specific Indian brain templates **will allow more reliable tracking of brain development and ageing.**

NIMHANS is the apex centre for mental health and neuroscience education in the country. It is an Institute of National Importance operates autonomously **under the Ministry of Health and Family Welfare.**

NIAEC

GS-III SCIENCE & TECHNOLOGY

Context

- The National Immunogenicity and Biologics Evaluation Centre (NIBEC) was recently inaugurated.

Aim

- For assessing clinical immunogenicity of viral vaccines, especially the ones in the pipeline for COVID-19.

Who established it?

- The facility was established jointly by **the Department of Biotechnology (DBT) and BharatiVidyapeeth University (BVU), Pune.**
- The facility has been established through BVU's constituent unit **Interactive Research School for Health Affairs (IRSHA) and BIRAC.**

Need to establish centre

- Vaccine development requires extensive evaluation in humans to establish safety, immunogenicity and clinical efficacy.
- Centralised Viral and Bacterial clinical Immunogenicity labs meeting the stringent **GCLP standards** were therefore identified as a critical need for the vaccine Industry.
- Also, Department of Biotechnology has taken myriads of initiatives to increase investments in research and development (R&D) of affordable Biotech Healthcare products.
- Example- National Biopharma Mission. It is an endeavor to identify the needs and gaps of Biotherapeutics, Vaccine and Devices Industry and address them.

Good Clinical Laboratory Practice (GCLP) is an international ethical and scientific quality standard for designing, conducting, recording and reporting trials that involve the participation of human subjects. Compliance with this standard provides public assurance that the rights, safety and well-being of trial subjects are protected, consistent with the principles that have their origin in the Declaration of Helsinki (ICH GCP Guideline).

About DBT

- The Department of Biotechnology (DBT), **under the Ministry of Science & Technology**, promotes and accelerates the development of biotechnology in India.
- It includes growth and application of biotechnology in the **areas of agriculture, healthcare, animal sciences, environment and industry.**

About BIRAC

- Biotechnology Industry Research Assistance Council (BIRAC) is a **not-for-profit**, Public Sector Enterprise, set up by Department of Biotechnology (DBT).
- It is an agency to empower the emerging Biotech enterprise to undertake strategic research and innovation.
- It aims to address nationally relevant product development needs.

About National Biopharma Mission

- The National Biopharma Mission (NBM) is an **industry-Academia Collaborative Mission** for accelerating biopharmaceutical development in the country.
- NBM is **50% co-funded by the World Bank** & is being implemented at Biotechnology Research Assistance Council (BIRAC).
- This program is **dedicated to deliver affordable products to the nation** with an aim to improve the health standards of India's population.
- Vaccines, medical devices, diagnostics and biotherapeutics are few of its most important domains.
- Besides this it focuses on, strengthening the clinical trial capacity and building technology transfer capabilities in the country.
- Under NBM the Government has launched **Innovate in India (i3) Programme**.
- **i3 aims to create an enabling ecosystem to promote entrepreneurship and indigenous manufacturing** in the sector.

About IRSHA

- **Interactive Research School for Health Affairs (IRSHA)** is a constituent unit of Bharati Vidyapeeth (Deemed to be University), **totally dedicated to research**.
- The institute was established in 2001. It is mandated to conduct research in priority areas of human health in co-ordination with other constituents of the university like Medical, Ayurveda, Homeopathy, Dental colleges etc.
- The core area of research includes **Mother and child health, Cancer, Diabetes, Obesity, Osteoarthritis & Herbal medicine**.

INDIA JOINS HYPERSONIC MISSILE CLUB

GS-III SCIENCE & TECHNOLOGY

Context

- Recently, India became the **fourth country after the United States, Russia and China** to develop and successfully test hypersonic technology.

About

- India successfully flight tested the **Hypersonic Technology Demonstrator Vehicle (HSTDV)** for the first time from the Dr Abdul Kalam Island off the coast of Odisha.
- The HSTDV, has been developed by the **Defence Research and Development Organisation (DRDO)**.

Hypersonic Weapon System

- In aerodynamics, a hypersonic speed is one that greatly exceeds the speed of sound, often stated as starting at speeds of Mach 5 and above.
- Thus, Hypersonic weapons **can travel at five times the speed of sound – Mach 5 and faster** – covering vast distances in minutes.

Mach Number

- It is the **ratio of the speed of a body to the speed of sound in the surrounding medium**. It is often used with a numeral (as Mach 1, Mach 2, etc.) to indicate the speed of sound, twice the speed of sound, etc.

'A Mach number is a measure of airspeed, and not of ground speed.'

Key Concepts

- * When an airplane is flying at **subsonic speed**, all of the air flowing around the airplane is at a velocity of less than the speed of sound (known as Mach 1).
- * When an airplane is flying at **transonic speed**, part of the airplane is experiencing subsonic airflow and part is experiencing supersonic airflow. Transonic speed is typically between Mach 0.80 and 1.20.
- * When an airplane is flying at **supersonic speed** (more than speed of sound: Mach 1), the entire airplane is experiencing supersonic airflow. Supersonic speed is from Mach 1.20 to 5.0.
- * If an airplane flies faster than Mach 5, it is said to be in hypersonic flight.

HSTDV

- The HSTDV is an **unmanned scramjet demonstration aircraft** for hypersonic speed flight.
- It is a carrier vehicle for hypersonic and **long-range cruise missiles**.
- It will have multiple civilian applications including the **launching of small satellites at low cost**.

Working

- The HSTDV cruise vehicle is **mounted on a solid rocket motor**, which will take it to a required altitude.
- Once it attains a certain speed, the **cruise missile will be ejected out of the launch vehicle**. Subsequently, the scramjet engine of the cruise missile will be ignited automatically.

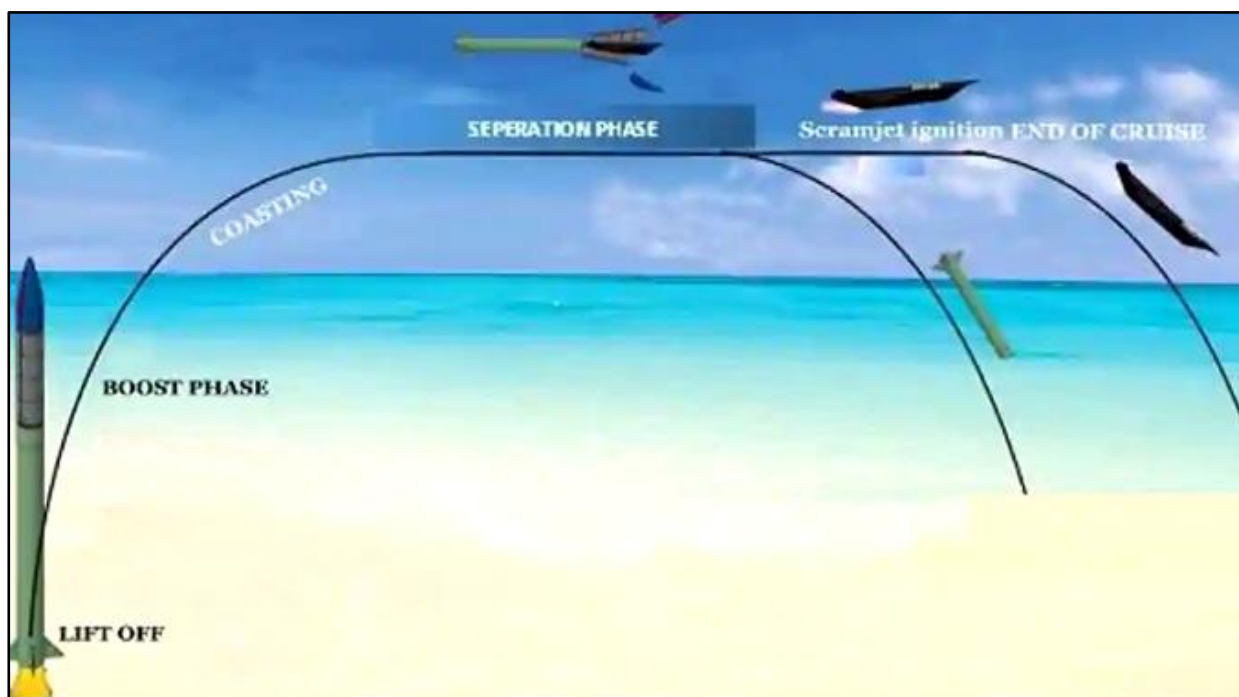


Fig: A graphic explaining the entire HSTDV flight maneuver. (Pic: DRDO)

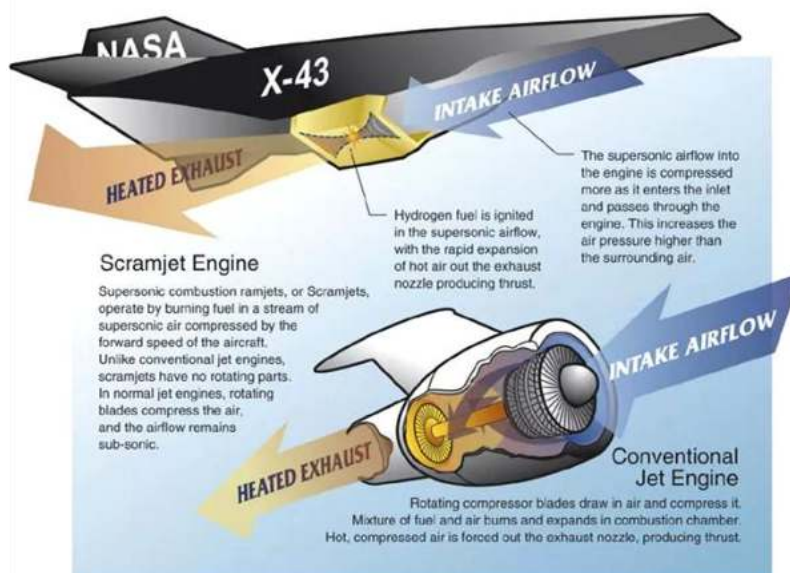
SCRAMJET PROPULSION

A scramjet (supersonic combustion ramjet) is a **variant of a ramjet air breathing jet engine** in which combustion takes place in supersonic airflow.

As in ramjets, a scramjet relies on high vehicle speed to compress the incoming air forcefully before combustion.

Difference

Whereas a ramjet decelerates the air to subsonic velocities before combustion, the airflow in a scramjet is supersonic throughout the entire engine. That allows the scramjet to operate efficiently at extremely high speeds.



Why are hypersonic vehicles powered by scramjet engines?

- An improvement over the ramjet technology, the scramjet engine operates efficiently at hypersonic speeds and allows supersonic combustion.
- Ramjet engines are efficient at supersonic speeds of around Mach 3 but **their performance drops when the vehicle hits hypersonic speeds.**

Significance

- HSTDV paves the way for India to develop hypersonic weapons that can travel six times faster than the speed of sound (Mach 6).
- The dual-use hypersonic technology has non-military applications too --- it **can be used for launching satellites and developing commercial planes.**

Cruise Missile Vs Ballistic Missiles

Cruise Missile

- A cruise missile locates its target, or **has a preset target**, and navigates there.
- Cruise missiles generally consist of **a guidance system, payload, and aircraft propulsion system.**
- Cruise missiles that can be launched from various platforms whether from Land, Sea (Submarine, Ship) or Air
- They are known **specifically for the low-level flight** which is staying relatively close to the surface of the earth to avoid detection from anti-missile systems and are designed to carry large payloads with high precision.
- Cruise missiles can be categorized by size, speed (subsonic or supersonic), and range, and whether launched from land, air, surface ship, or submarine.
- Land attack missiles (LACM), are the cruise missiles which are designed to hit stationary or moving targets on land.

Ballistic Missile

- The ballistic missile is **targeted as a projectile from a single launch force with not much-added guidance.**
- It is launched directly into the **high layers of the earth's atmosphere.**
- It travels well outside the atmosphere and then the warhead detaches and falls back to earth. It follows the path of a ball thrown upwards which falls down.
- Since it **depends on gravity to reach its target**, it's called a ballistic missile.
- Ballistic missiles that fly above the atmosphere have a **much longer range than cruise missiles** of the same size.
- Ballistic missiles can travel extremely quickly along their flight path. An Inter Continental Ballistic Missile can strike a target within a 10,000 km range in about 30 to 35 minutes.
- With speeds of over 5,000 m/s, ballistic missiles are much **harder to intercept than cruise missiles**, due to the much shorter time available.
- Ballistic missiles are some of the most feared weapons available, despite the fact that cruise missiles are cheaper, more mobile, and more versatile.
- **Tactical, short- and medium-range missiles are often collectively referred to as tactical and theatre ballistic missiles, respectively.**

INDIA ENTERS ELITE HYPERSONIC MISSILE CLUB

India has successfully flight tested hypersonic technology that will pave the way towards development of missiles travelling at six times the speed of sound. The cruise vehicle continued on its flight path at Mach 6 speed or nearly 2km/second for more than 20 seconds.

WHAT IS HYPERSONIC AIR BREATHING SCRAMJET TECHNOLOGY

A scramjet engine is an improvement over the ramjet engine as it efficiently operates at hypersonic speeds and allows supersonic combustion. Thus it is known as Supersonic Combustion Ramjet, or Scramjet.

The Scramjet engine designed by ISRO uses Hydrogen as fuel and the Oxygen from the atmospheric air as the oxidiser.

ISRO's Advanced Technology Vehicle (ATV), which is an advanced sounding rocket, was the solid rocket booster used for this recent test of Scramjet engines at supersonic conditions.

ATV carrying Scramjet engines weighed **3277 kg** at lift-off.

WHAT THIS MEANS FOR INDIA?

India can now develop hypersonic weapons that can travel six times faster than the speed of sound.

OTHER COUNTRIES WHICH HAVE DEVELOPED THIS TECHNOLOGY

Only the US, Russia and China have developed technologies to field hypersonic weapons.

Source: ISRO

IANS GRAPHICS

- Long- and medium-range ballistic missiles are generally designed to deliver nuclear weapons because their payload is too limited for conventional explosives to be cost-effective.
- ✓ Payload is the **carrying capacity of an aircraft or launch vehicle**, usually measured in terms of weight.

Table 1 – Key characteristics of ballistic and cruise missiles

Characteristics	Ballistic missiles	Cruise missiles
Range	From low to very high <i>Up to 15 000 km</i>	Mostly around 1 000 km <i>Up to 4 000 km</i>
Altitude	High <i>Easily detectable</i>	Low <i>Hard to detect</i>
Precision	Low – around a few hundred metres <i>Fit for large targets</i>	High – a few metres <i>Fit for small and mobile targets</i>
Speed	Up to 25 000 km/h at impact <i>Very hard to intercept</i>	Around 1 000 km/h <i>Possibility to intercept</i>

Data source: EPRS.

MERGER OF BLACK HOLES

GS-III SCIENCE & TECHNOLOGY

Context

- LIGO and Virgo Observatories have for the first time detected a collision between two black holes.

About

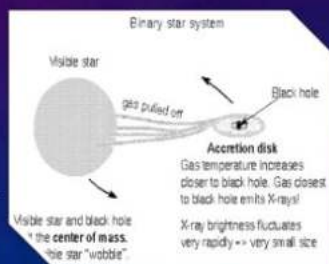
- A binary black hole merger produced **gravitational waves equal to the energy of eight suns**. These waves were detected by the observatories.
- The merger took place around 17 billion light years away. The universe was just about half its age at that time.

Black holes

- A black hole is an astronomical object with a gravitational pull so strong that nothing, not even light, can escape it.
- **Event horizon, defines the boundary of a black hole**. Here, the velocity of an object passing nearby needs to exceed the speed of light to escape the black hole.
- Otherwise Matter and radiation fall in, but they can't get out. Speed of light is the speed limit of the cosmos.

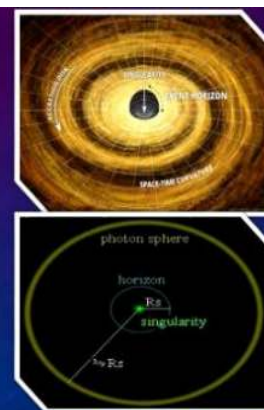
FORMATION AND GROWTH OF BLACK HOLES:

- When a star of mass more than 3 times mass of the sun reaches to an end of its life, it gets crushed in its own gravity leaving behind a compact black hole.
- Once a black hole has formed, it can continue to grow by absorbing additional matter like gases and dust from surrounding to become heavier and larger.
- Large black holes are formed by the combination of small black holes and also when small black holes absorb huge stars.



STRUCTURE OF BLACK HOLES:

- **Singularity:**
The point where whole mass of a black hole is concentrated.
- **Photon Sphere:**
The outer edge where light bends but is still escapable.
- **Event Horizon:**
It is a "point of no return" around a black hole.
- **Accretion Disk:**
It is a disk of gases, dust, stars and planets that fall into the orbit of a black hole.



TYPES OF BLACK HOLES:

- **Stellar-mass Black Holes:**
Stellar-mass black holes are created when massive stars explode, leaving behind a black hole with the mass of just a few suns.
- **Supermassive Black Holes:**
Supermassive black holes exist in the hearts of galaxies and usually contain the mass equivalent to millions and billions of suns.
- **Intermediate Black Holes:**
Such bodies could form when stars collide in a chain reactions and usually contain the mass equivalent to hundreds and thousands of suns.



Gravitational Waves

- A gravitational wave is an invisible (yet incredibly fast) ripple in space.
- Gravitational waves travel at the speed of light (186,000 miles per second).
- These waves **squeeze and stretch anything in their path as they pass by.**

What causes gravitational waves?

- The most powerful gravitational waves are created when objects move at very high speeds. Some examples of events that could cause a gravitational wave are:
 - ✓ when a star explodes asymmetrically (called a supernova)
 - ✓ when two big stars orbit each other
 - ✓ **when two black holes orbit each other and merge.**

How do we know that gravitational waves exist?

- In 2015, scientists detected gravitational waves for the very first time. They used a very sensitive instrument called LIGO (**Laser Interferometer Gravitational-Wave Observatory**).
- These first gravitational waves happened when two black holes crashed into one another.
- The collision happened 1.3 billion years ago. But, the ripples didn't reach Earth until 2015!

How are gravitational waves detected?

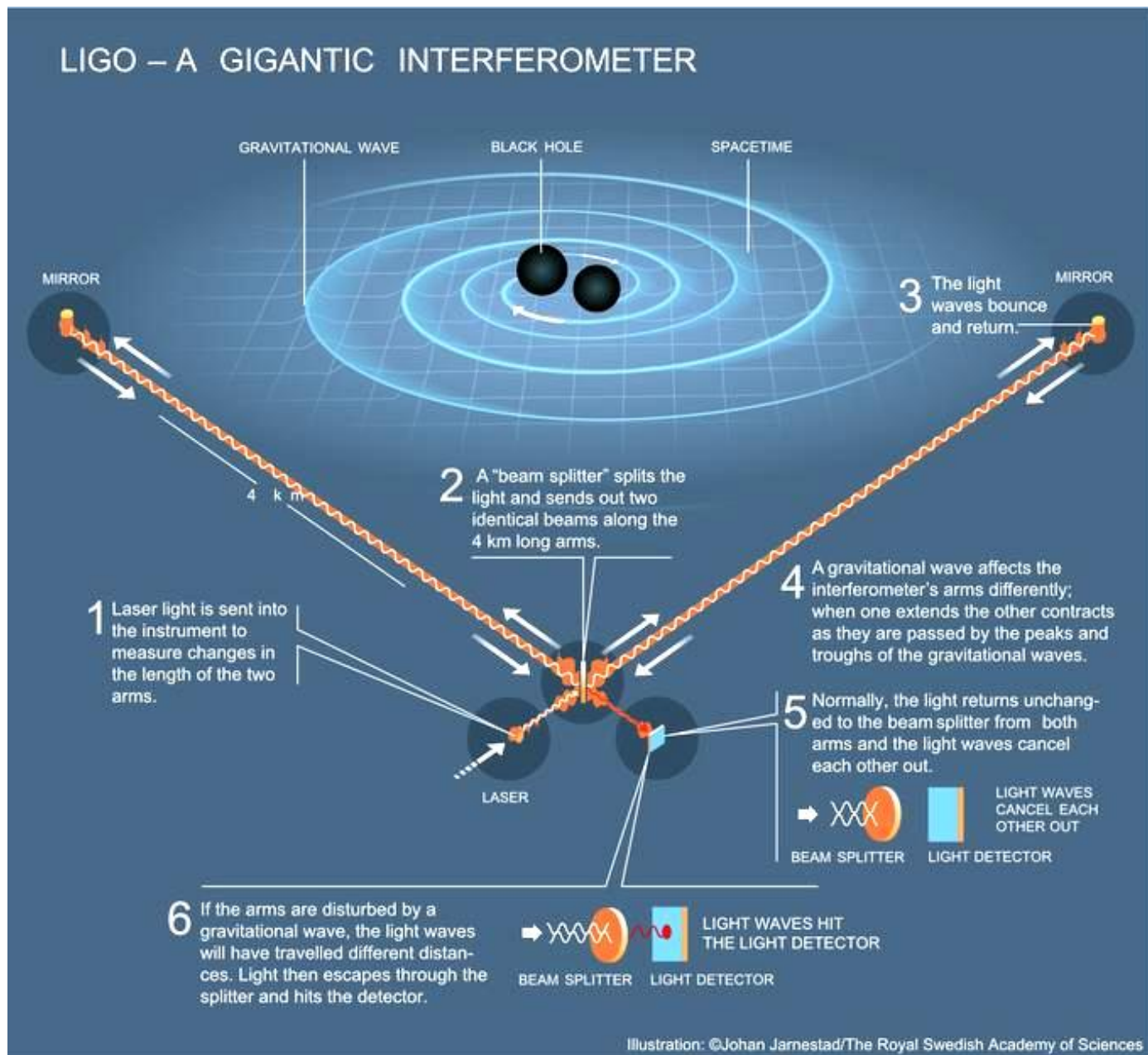
- When a gravitational wave passes by Earth, it squeezes and stretches space.
- LIGO can detect this squeezing and stretching. Each LIGO observatory has two "arms" that are each more than 4 kilometers long.
- A passing gravitational wave causes the **length of the arms to change slightly**. The observatory uses lasers, mirrors, and extremely sensitive instruments to detect these tiny changes.
- Thus, VIRGO & LIGO are large interferometers designed to detect gravitational waves.

Watch this video to know about the Journey of Gravitational Waves:

Link: <https://youtu.be/FIDtXIBrAYE>



FIG: LIGO Observatory: Washington,US



SOLAR CYCLE 25

GS-III SCIENCE & TECHNOLOGY

Context

- Scientists from NASA and the National Oceanic and Atmospheric Administration (NOAA) announced their predictions about the new solar cycle, called Solar Cycle 25, which has begun.

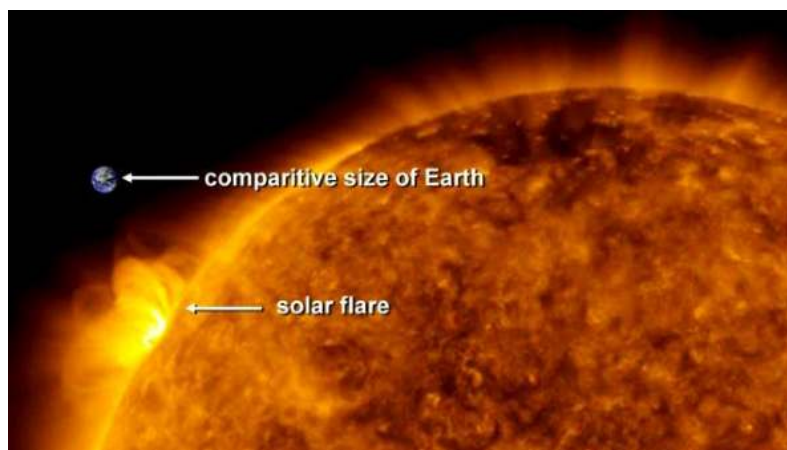
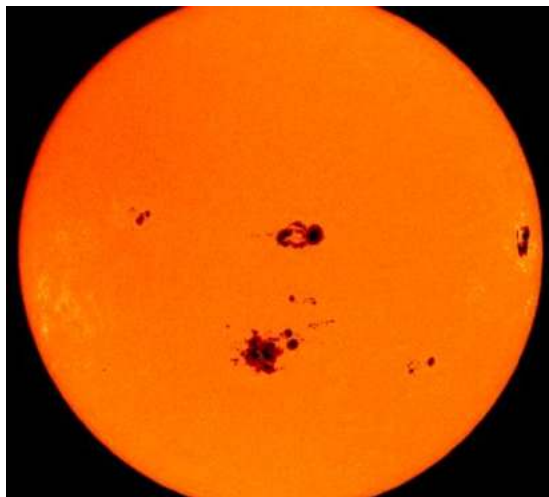
What is a solar cycle?

- Our Sun is a huge ball of electrically-charged hot gas. This charged gas moves, generating a powerful magnetic field.
- Since the gases on the Sun's surface are constantly moving, these magnetic fields can get stretched, twisted and tangled creating motion on the surface, which is referred to as solar activity.
- Thus, Sun's magnetic field goes through a cycle, called the solar cycle.
- Every 11 years, the Sun's magnetic field completely flips.** This means that the Sun's north and south poles switch places. Then it takes about another 11 years for the Sun's north and south poles to flip back again.

How do scientists track solar activity?

- Scientists track a solar cycle **by counting the number of sunspots.**
- Sunspots are areas that appear dark on the surface of the Sun. They appear dark because they are **cooler than other parts of the Sun's surface.**
- These spots, are the visible markers of the Sun's magnetic field.

- When a Sunspot reaches up to 50,000 km in diameter, it may release a huge amount of energy that can lead to solar flares.
- Solar flares are a sudden explosion of energy **caused by tangling, crossing or reorganizing of magnetic field lines near sunspots.**
- The **beginning of a solar cycle is a solar minimum**, or when the Sun has the least sunspots.
- Over time, solar activity—and the number of sunspots—increases.
- The middle of the solar cycle is the solar maximum, or when the Sun has the most sunspots.
- As the cycle ends, it fades back to the solar minimum and then a new cycle begins.
- **Sunspots form a blanket that protects the solar system from harmful cosmic radiation.**



Significance

- Solar activity can **affect satellite electronics and limit their lifetime.**
- Radiation can be dangerous for astronauts who do work on the outside of the International Space Station.
- If scientists predict an active time in the solar cycle, satellites can be put into safe mode and astronauts can delay their spacewalks.
- Forecasting of the solar cycle can also help scientists **protect our radio communications on Earth.**

Some other findings

- Solar minimum for **Solar Cycle 25** occurred in December 2019.
- Scientists predict a solar maximum (middle of the solar cycle) will be reached by July 2025.
- This solar cycle will be as strong as the last solar cycle, which was a "below-average cycle" but not without risks.

GIANT RADIO GALAXIES

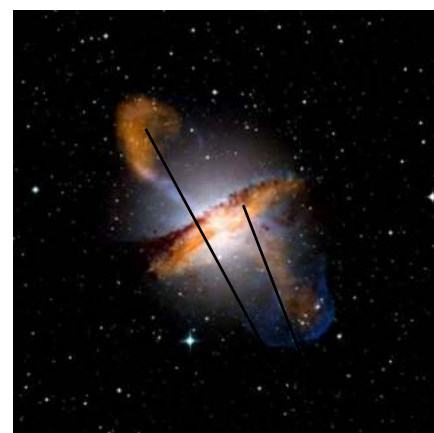
GS-III SCIENCE & TECHNOLOGY

Context

- Researchers have found the largest sample of giant radio galaxies (GRG) in the Universe.
- This is the first time such a large catalogue of GRGs has been made.

Radio Galaxies

- A particular type of active galaxy **that emits more light at radio wavelengths than at visible wavelengths**, also known as a radio-luminous galaxy or radio-loud galaxy.
- Radio galaxies are **driven by non-thermal emission.**
- Some radio galaxies, called extended radio galaxies, have lobes of radio emission extending millions of light-years from their nuclei.
- **Centaurus A** is a nearby example of an extended radio galaxy that features **two outer lobes 650,000 and 1,350,000 light-years** in diameter.
- In contrast, compact radio galaxies emit radio lobes not much larger than the galactic nucleus.

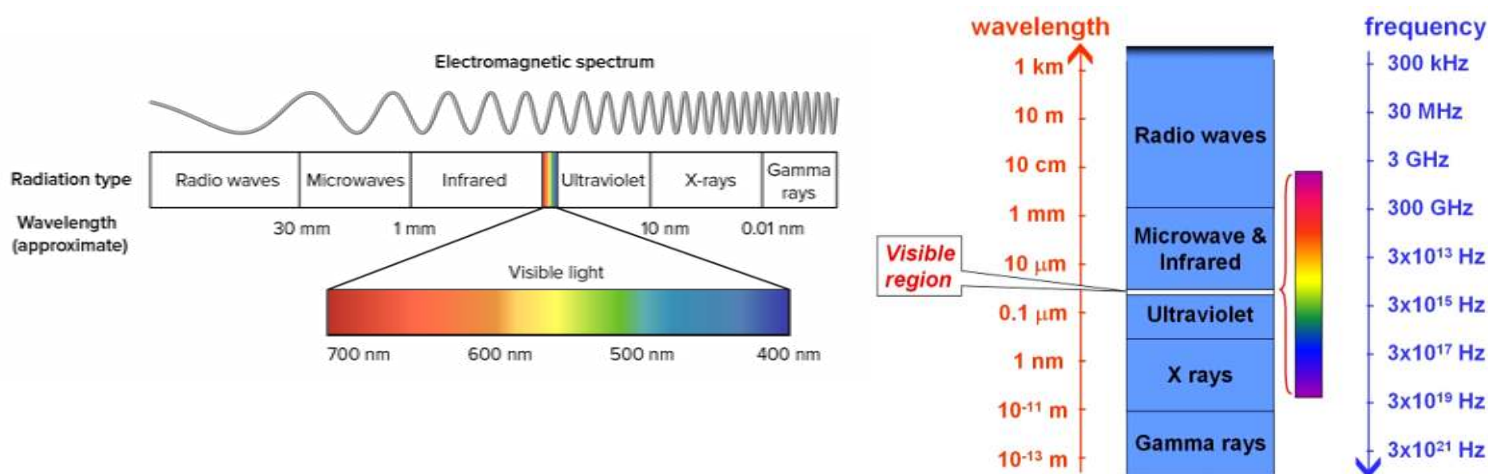


Centaurus A
radio lobes

Origin

- The universe has billions of galaxies and almost all have super-massive black holes at the centre.

- Some of these black holes are active and produce jets travelling almost at the speed of light.
 - These jets **are visible in radio light or at radio wavelength** of the electromagnetic spectrum.
- ie. wavelengths between **10 MHz and 100 GHz**.
- Such galaxies, which have active black holes **shooting high-speed jets**, are called radio galaxies.



DATA SONIFICATION PROJECT

GS-III SCIENCE & TECHNOLOGY

Context

- Recently, NASA's Chandra X-Ray Center (CXC) has unveiled a new 'sonification' project that transforms data from astronomical images into audio.

What is data sonification?

- Data sonification refers to the **use of sound values to represent real data**. Simply put, it is the auditory version of data visualisation.
- In NASA's recent Chandra project, **data is represented using a number of musical notes**.
- With this project, users can now experience different phenomena captured in astronomical images as an auditory experience.
- The birth of a star, a cloud of dust or even a black hole can now be 'heard' as a high or low pitched sound.
- Users can now 'listen' to images of the Galactic Centre, the remains of a supernova called Cassiopeia A, as well as the Pillars of Creation Nebula. These are all located in a region around 26,000 light years away from Earth.

How is the data collected?

- The data has been collected by NASA's Chandra X-Ray Observatory, Hubble Space Telescope and Spitzer Space Telescope — each of which is represented by a different musical 'instrument'.

How did NASA translate astronomical images into sound?

- NASA's distant telescopes in space collect inherently digital data, in the form of ones and zero (binary).
- The Chandra project has translated the data into sound. Usually they are only converted into images.
- Pitch and volume are used to denote the brightness and position of a celestial object or phenomenon.

Chandra X-ray

- The Chandra X-ray Observatory is **the world's most powerful X-ray telescope**.
- It has eight-times greater resolution and is able to detect sources more than 20-times fainter than any previous X-ray telescope.
- Chandra is **an Earth satellite in a 64-hour orbit**, and its mission is ongoing as of 2020.
- It is part of NASA's fleet of "Great Observatories" along with the Hubble Space Telescope, the Spitzer Space Telescope and the now de-orbited Compton Gamma Ray Observatory.

Galactic Center

- The Galactic Center is the **rotational center of the Milky Way galaxy**.
- It comprises a collection of celestial objects — neutron and white dwarf stars, clouds of dust and gas, and a **super-massive black hole called Sagittarius A***.

- Sagittarius A* weighs four million times the mass of the sun.

Cassiopeia A

- Cassiopeia A (Cas A) is the remnant of a massive star that exploded about 300 years ago. (Supernova Explosion)
- Cassiopeia A, is the **strongest source of radio emission in the sky** beyond the solar system.
- It is located in the direction of the constellation Cassiopeia about **11,000 light-years from Earth**.
- The light from the event is estimated to have reached Earth between 1662 and 1700.
- At the centre of the remnant is a **neutron star**, which was the first detected to have a carbon atmosphere.

Pillars of Creation

- "Pillars of Creation" is a photograph taken by the Hubble Space Telescope of interstellar gas and dust.
- It is located in the centre of the **Eagle Nebula**, which is **also known as Messier 16**.
- It is specifically in the **Serpens constellation, some 6,500–7,000 light years from Earth**.



Significance of Data Sonification Project

- The sonification project aims to incorporate NASA science content into the learning environment effectively and efficiently for learners of all ages.
- Over the years, NASA has been working towards making data about space accessible for a larger audience.
- Sonification projects like this allow audiences, including visually-impaired communities to experience space through data.

METHANE HYDRATE

GS-III SCIENCE & TECHNOLOGY

Context

- Recently, a study has found that the methane hydrate deposits are located in the Krishna-Godavari (KG) basin are of biogenic origin.
 - ✓ Biogenic : produced by living organisms **biogenic** methane formation.

About Methane Hydrate

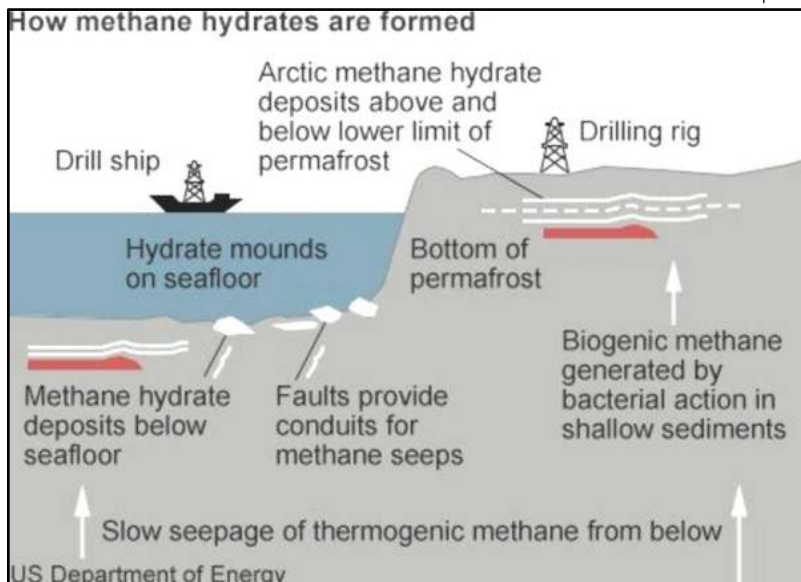
- Methane hydrate is a **crystalline solid** that consists of a **methane molecule** surrounded by a cage of interlocking water molecules.
- It is an "ice" that **only occurs naturally in subsurface deposits** where temperature and pressure conditions are favorable for its formation.
- It starts burning when an open flame is brought close to it. Hence, it is called **"Fiery Ice"**.
- **Only water is left after combustion.**
- Methane is the **primary component of natural gas**, and the development of methane hydrate follows almost the same procedure as that for natural gas.

Where Are the Methane Hydrate Deposits?

- Four Earth environments have the temperature and pressure conditions suitable for the formation and stability of methane hydrate. These are:
 - sediment and sedimentary rock units below Arctic permafrost;**
 - sedimentary deposits along continental margins;**
 - deep-water sediments of inland lakes and seas; and,**
 - under Antarctic ice. .**
- With the exception of the Antarctic deposits, methane hydrate accumulations are not very deep below Earth's surface.
- In most situations the methane hydrate is within a few hundred meters of the sediment surface.

The enormous potential of Methane Hydrate

- Methane Hydrate has a huge potential as an energy resource and for their role in global climate change.
- One cubic metre of the compound releases about 160 cubic metres of gas, making it **a highly energy-intensive fuel.**
- There is more energy in methane hydrates than in all the world's oil, coal and gas put together.
- The enormous amounts of methane hydrate under the ocean and beneath arctic permafrost represent an estimated 53% of all fossil fuel (coal, oil, natural gas) reserves on earth, about 10,000 qigatons.



Methane Hydrate Hazards

- Methane hydrates are sensitive sediments. They can rapidly dissociate with an increase in temperature or a decrease in pressure.
- This dissociation produces free methane and water.
- The conversion of solid sediment into liquids and gases will create a loss of support and shear strength.
- These can cause submarine slumping, landslides, or subsidence that can damage production equipment and pipelines.
- Methane is a powerful greenhouse gas. Warmer Arctic temperatures could result in gradual melting of gas hydrates below permafrost.
- This could lead to a potential catastrophe.

Krishna Godavari Basin

- The Krishna Godavari Basin is a petroliferous basin of continental margin located on the east coast of India.
- The Krishna-Godavari Basin expands from Rajahmundry seaward to the Bay of Bengal.
- Large reserves of Natural Gas and coal have been discovered in the Krishna Godavari river basin.
- Krishna Godavari Dhirubhai 6 (KG-D6) was Reliance's first offshore gas field development and its first underwater discovery.
- It was also India's largest deposit of natural gas and the largest such discovery in the world in 2002.
- KG inland and offshore basins **have good prospects of tight oil and tight gas reserves.**
 - ✓ Tight Oil is **light crude oil** contained in **petroleum-bearing formations of low permeability**, often shale or tight sandstone.
 - ✓ It requires the same hydraulic fracturing and often uses the **same horizontal well technology** used in the production of shale gas.
 - ✓ While sometimes called "shale oil", **tight oil should not be confused with oil shale.**
 - ✓ Oil shale is the term given to very fine-grained sedimentary rock containing relatively large amounts of kerogen. Oil shale is a misnomer because **kerogen isn't crude oil**, and the rock holding the kerogen often isn't even shale.
 - ✓ Kerogen **is solid, insoluble organic matter in** sedimentary rocks. Consisting of an estimated 1016 tons of carbon, it is the **most abundant source of organic compounds on earth**, exceeding the total organic content of living matter by 10,000-fold.
 - ✓ It is insoluble in normal organic solvents and it does not have a specific chemical formula.
 - ✓ Upon heating, kerogen converts in part to liquid and gaseous hydrocarbons. **Petroleum and natural gas form from kerogen.**
- KGB is home to olive ridley sea turtle, a vulnerable species.

GLOBAL INNOVATION INDEX

GS-III SCIENCE & TECHNOLOGY

Context

- Recently, the 13th edition of the **Global Innovation Index (GII) 2020** was released.

Who releases GII?

- World Intellectual Property Organization (WIPO) & Cornell University and INSEAD.

2020 Theme

- Who Will Finance Innovation?

Findings

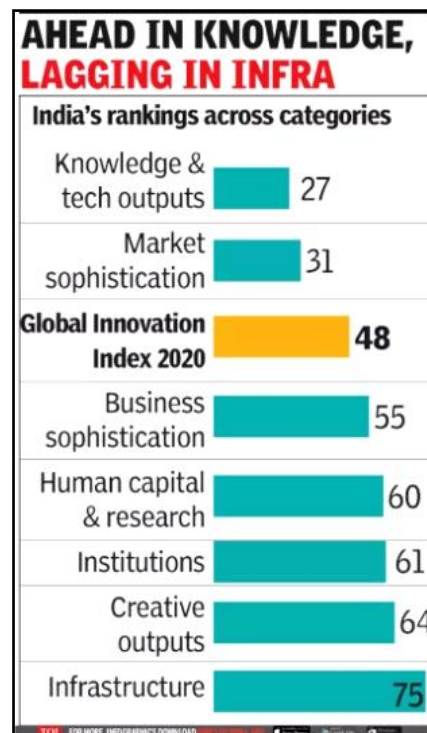
- The COVID-19 crisis hit the innovation landscape at a time when innovation was flourishing.
- The **money to fund innovative ventures is drying up.**
- The impact of this shortage in innovation finance will be uneven, with the **negative effects felt more heavily by early-stage Venture Capital (VC)**, by R&D-intensive start-ups, and in countries that are not typically VC hotspots.
- The COVID-19 crisis has already catalyzed innovation in many new and traditional sectors, such as health, education, tourism and retail.

2020 Top Rankers

- Switzerland, Sweden, the United States of America, the United Kingdom, and the Netherlands.**
- The top-performing economies in the GII are still almost exclusively from the high-income group.

India's Performance

- India has for the **first time made it to the top 50 countries** in the Global Innovation Index (GII) 2020.
- India has become the **third-most innovative lower-middle-income economy in the world.**
- India ranks in the top 15 indicators such as information and communications technology (ICT) services exports, government online services, graduates in science and engineering, and research and development (R&D)-intensive global companies.



Asia

- Over the years, India, China, the Philippines, and Vietnam are the economies with the most significant progress in their GII innovation ranking over time. All four are now in the top 50.
- China is the only middle-income economy in the GII top 30.

WIPO

- WIPO is one of the 15 specialized agencies of the United Nations (UN)
- WIPO was created to promote and protect intellectual property (IP) across the world by cooperating with countries as well as international organizations.
- WIPO's two main objectives are:- (i) to promote the protection of intellectual property worldwide; and (ii) to ensure administrative cooperation among the intellectual property Unions established by the treaties that WIPO administers.

INSEAD

- It is a graduate business school with locations in Europe, Asia, the Middle East, and North America.

NIDHI PROGRAMME

GS-III SCIENCE & TECHNOLOGY

Context

- Recently, a brochure featuring Entrepreneurs in Residence (EIR) under the National Initiative for Developing and Harnessing Innovations (NIDHI) programme was launched by **Department of Science & Technology.**

EIR

- Entrepreneurs-in-Residence (EIR) Programme is under National Initiative for Developing and Harnessing innovations (NIDHI) of Department of Science and Technology.
- It supports aspiring or budding entrepreneur of considerable potential for pursuing a promising technology business idea over a period up to 18 months with a subsistence grant up to Rs 30000 per month with a maximum cap for total support of Rs 3.6 lakh to each EIR over a maximum of 18 months.

NIDHI

- NIDHI (National Initiative for Development and Harnessing Innovations), is an umbrella program is pioneered by the Department of Science & Technology (DST).

Aim

- To nurture ideas and innovations (knowledge-based and technology-driven) into successful startups.

Objectives

- To take forward student innovations.
- To promote student startups.
- To accelerate the journey of idea to prototype by providing initial funding assistance.

Conclusion

- The NIDHI-EIR programme provides **tremendous opportunities for innovative entrepreneurs** to expand their networks and get critical feedback on their ventures in order to promote their entrepreneurial career goals and aspirations.
- This program is important in that it creates a pipeline of startups with a focus on young budding entrepreneurs.

HCNG

GS-III SCIENCE & TECHNOLOGY

What is in news?

- The **Ministry of Road Transport and Highways** has allowed use of H-CNG (18% mix of hydrogen) in CNG engines.
- The Ministry has been notifying various alternate fuels under Clean Fuels for transportation.
- The Bureau of Indian Standards (BIS) has also developed specifications of Hydrogen enriched Compressed Natural Gas (H-CNG) for automotive purposes, as a fuel.

What is HCNG?

- HCNG is a hydrogen-enriched compressed natural gas (CNG). In Delhi, instead of physically blending hydrogen with CNG, hydrogen spiked CNG will be produced using compact reforming process patented by Indian Oil Corporation.

What are its benefits?

- It is **cleaner and more economical**.
- Power output of HCNG is also better than CNG ones.
- HCNG means four per cent more fuel economy than CNG.
- At a time of emission norms being uppermost on the minds of the policy makers, HCNG will ensure 70% more reduction in carbon monoxide emissions compared to CNG.
- It requires only small hydrogen storage and a column for the mixing of hydrogen with natural gas at existing CNG stations.
- Safety components **are similar to the CNG**. HCNG is easier and safer to use than hydrogen as it contains very low energy content from hydrogen i.e., up to 30% by volume.
- HCNG reduces the engine's unburned hydrocarbon emissions and speeds up the process of combustion.
- The engine's fuel efficiency is improved by blending the CNG from hydrogen which lowers the fuel consumption of the vehicle.
- The thermal efficiency and fuel economy is also increased by HCNG.

MOON MAY BE RUSTING

GS-III SCIENCE & TECHNOLOGY

What is in news?

- Mars has long been known for its rust. Iron on its surface, combined with water and oxygen from the ancient past, give the Red Planet its hue.
- But scientists were recently surprised to find evidence that our airless Moon has rust on it as well.

Why is it puzzling?

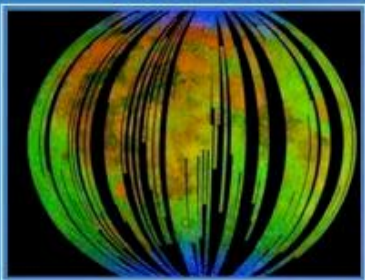


- Moon's surface does not contain water and oxygen. And rust occurs when iron is exposed to a combination of water and oxygen.

Plausible explanation

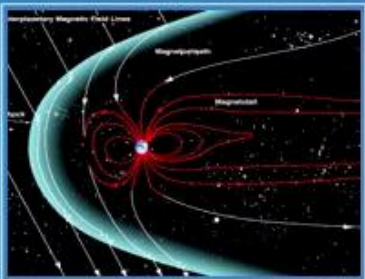
- The Indian Space research Organization's Chandrayaan-1 orbiter while it surveyed the moon in 2008, revealed that the poles of the moon had very different compositions than the rest of it.
- This composite image of the moon, from the Moon Mineralogy Mapper shows water ice on the poles. The researchers found **hints of hematite when focusing in on the spectra in those regions.**

- The moon's polar surfaces has iron-rich rocks with spectral signatures that matches hematite.
- The mineral hematite, commonly found in Earth's surface, is a specific type of iron oxide, or rust, with the formula Fe_2O_3 .
- Also, the moon doesn't have an atmosphere of its own to provide sufficient amounts of oxygen, but it has trace amounts donated by Earth's atmosphere.
- This terrestrial oxygen travels to the moon along an elongated extension of Earth's magnetic field called a "magnetotail."
- The moon is mostly devoid of water, apart from frozen water found in lunar craters on the moon's far side — far from where most of the hematite was found.
- But the researchers propose that fast-moving dust particles that bombard the moon might free water molecules locked into the moon's surface layer, allowing the water to mix with the iron.
- These dust particles might even be carrying water molecules themselves, and their impact might create heat that could increase the oxidation rate thereby creating rust.

CHANDRAYAAN 1 VS 2		
A look at the major differences between the two missions		
	CHANDRAYAAN-1	CHANDRAYAAN-2
Mission	<ul style="list-style-type: none"> India's first lunar mission India's first deep-space mission 	<ul style="list-style-type: none"> Follow-up mission to Chandrayaan-1 ISRO's first inter-planetary mission to land rover on any celestial body
Goals	Involved orbiting around moon	Involves orbiter, lander, and rover
Approx cost (Rs cr)	380	960
Launch vehicle	PSLV-C11	GSLV Mk-III
Operational for	312 days	Approx 365 days
Payloads (or study devices)	11 (built in India, USA, UK, Germany, Sweden & Bulgaria)	14 (13 Indian, 1 from NASA)
Major Objectives	<ul style="list-style-type: none"> To conduct scientific experiments using instruments on the spacecraft To increase scientific knowledge 	<ul style="list-style-type: none"> To soft-land on the lunar surface Test new technologies and conduct experiments on the moon
Only US, Russia and China have been able to soft-land spacecraft on lunar surface		

CHANDRAYAAN-1 SPOTS RUSTING ON THE MOON



Blue areas in this composite image from the Moon Mineralogy Mapper (M3) aboard the Indian Space Research Organization's Chandrayaan-1 orbiter show water concentrated at the Moon's poles. Homing in on the spectra of rocks there, researcher found signs of hematite, a form of rust.

Earth's magnetic atmosphere and magnetotail, which extends away from the Sun.

- ISRO's maiden mission to Earth's natural satellite "**Chandrayaan-1**" orbiter shows that the Moon may be rusting along the poles
- Occurrence of rust is a conundrum because even though the Moon is known to have iron-rich rocks littered across the surface, it's not known for the presence of water and oxygen—two elements that need to interact with iron to create rust.
- Researchers at the **National Aeronautics and Space Administration (NASA)** believe that this could be because Earth's own atmosphere is lending a helping hand.
- Sign that Moon's poles are home to water has emerged from the **Chandrayaan-1's** data.
- Earth's atmosphere could be protecting the Moon as well.

drjitendras
 DrJitendraSingh
 Ddrjitendrasingh

AAREY FORESTLAND

GS-III ENVIRONMENT

Context

- Maharashtra Chief Minister announced that the state government would designate a 600-acre parcel of land in the heart of urban Mumbai as a reserved forest.

Aarey forest

- It falls within the **eco-sensitive zone of Sanjay Gandhi National Park (SGNP)**.
- It is an urban, unclassified and degraded forest.
- It is classified as **mixed moist deciduous type** forest.
- It acts as a buffer between SGNP and the city, being one of the few green spaces left in Mumbai.
- It is home to around 10,000 individuals who live in 27 tribal hamlets.

Is the area under threat of encroachment?

- The big infrastructure projects like the Metro, urban and transport planners are seeing this space for development.

Is Aarey forest area is now insulated from future threats of encroachment?

- Of the 1,800-plus acres of open space available, only 600 acres will be earmarked as a reserve forest.

What is a reserve forest?

- Forest reserves are portions of state lands where **commercial harvesting of wood products is excluded to capture elements of biodiversity** that can be missing from sustainably harvested sites.
- A reserved forest is the forests accorded a certain degree of protection.
- The term was first introduced in the Indian Forest Act, 1927 in British Raj, to refer to certain forests granted protection under the British crown in British India.
- Land rights** to forests declared to be Reserved forests are typically **acquired and owned** by the **Government of India**.
- Unlike national parks of India or wildlife sanctuaries of India, **reserved forests are declared by the respective state governments**.
- In Reserved forests, rights to **all activities** like hunting, grazing, etc. are **banned** unless specific orders are issued otherwise.
- The first Reserve Forest Of India was **Satpura National Park**.
- Protected forests are of two kinds - **demarcated protected forests and undemarcated protected forests**, based on whether the limits of the forest have been specified by a formal notification.

What is the process of earmarking the land as a forest?

- Under Section 4 of The Indian Forest Act, 1927, the state government can "constitute any land a reserved forest" by issuing a notification in the Official Gazette, "declaring that it has been decided to constitute such land a reserved forest", and "specifying, as nearly as possible, the situation and limits of such land"
- The government must also appoint a Forest Settlement Officer (FSO) "to inquire into and determine the existence, nature and extent of any rights alleged to exist in favour of any person in or over any land comprised within such limits or in or over any forest-produce, and to deal with the same".
- The FSO will seek suggestions and objections from residents and others within 45 days of initiating the process.
- After taking into account the suggestions and objections, the process of turning the land into a reserved forest will be completed.
- Thereafter, the area will be protected from any construction.

CSCAF 2.0

GS-III ENVIRONMENT

Context

- Urban affairs minister launched Climate Smart Cities Assessment Framework (CSCAF 2.0) and Streets for People Challenge.

CSCAF

- Aim to provide Roadmap for cities towards Combating Climate Change while planning/implementing their actions including investments.
- It intends to inculcate Climate-Sensitive Approach to Urban Planning and Development.

Need

- In the last decade, increasing frequency of cyclones, floods, heatwaves, water scarcity and drought-like conditions caused adverse impacts on cities.
- These extreme events and risks caused loss of life and impacted the economic growth.

CSCAF Framework

- It has 28 indicators across five categories namely; (i) Energy and Green Buildings, (ii) Urban Planning, Green Cover & Biodiversity, (iii) Mobility and Air Quality, (iv) Water Management and (v) Waste Management.

Implementing agency

- The Climate Centre for Cities under National Institute of Urban Affairs (NIUA) is supporting Ministry of Housing and Urban Affairs (MoHUA) in implementation of CSCAF.

Streets for people challenge

Need

- To address these issues of limited public transport options, narrow, crowded sidewalks particularly in market places and deterioration of mental health.
- Pedestrianisation of streets for walking and creating public spaces.
- Transforming streets for walking and cycling, to ensure safe mobility during COVID-19.

Aim

- To support cities to develop unified vision of streets in consultation with stakeholders.
- Will inspire cities to create walking-friendly/ vibrant streets through quick, innovative/ low-cost measures.
- All cities will be encouraged to use 'test-learn-scale' approach to initiate flagship and neighbourhood walking interventions.



SUPPORT TO CITIES IN IMPLEMENTING CSCAF 2.0



LAND DEGRADATION & CORAL REEF PROGRAM

GS-III ENVIRONMENT

Context

- The Environment Ministerial Meeting (EMM) of the G20 countries took place through video conferencing under the Presidency of Kingdom of Saudi Arabia.

Highlights of the summit

India's Environment Minister highlighted:

- India has taken significant steps to protect the environment and forest and wildlife as well as combating pollution and climate change.
- India is committed to work with G20 nations for a better world.
- India has been taking measures to enhance coral reef conservation.
- Efforts made by the National Coastal Mission Programme under which government has taken many steps to protect and sustain coral reefs in the country.
- Efforts made by India towards achieving land degradation neutrality, and towards the attainment of global goals of climate change mitigation and adaptation.
- India believes that Equity, Common but differentiated responsibilities, finance and technology partnerships are key pillars and India is walking the talk on Paris Agreement and its Climate commitments.

Global Initiative on Reducing Land Degradation

- It aims to strengthen the implementation of existing frameworks to prevent, halt, and reverse land degradation within G20 member states and globally, taking into account possible implications on the achievement of other SDGs and adhering to the principle of no harm.

The Global Coral Reef R&D Accelerator Platform

- It is an innovative action-oriented initiative aimed at creating a global research and development (R&D) program to advance research, innovation and capacity building in all facets of coral reef conservation, restoration, and adaptation, and strengthen ongoing efforts and commitments made to enhance coral reefs conservation and their further degradation.



Coral reef

- A coral reef is an underwater ecosystem characterized by reef-building corals.
- Reefs are formed of colonies of coral polyps held together by calcium carbonate.
- Most coral reefs are built from stony corals, whose polyps cluster in groups.
- "Main types" of coral reef are the fringing reef, barrier reef, atoll, "bank or platform reef" and patch reef.
- Coral reefs deliver ecosystem services to tourism, fisheries and coastline protection.

Coral bleaching



BLUE FLAG BEACHES BEAMS

GS-III ENVIRONMENT

Context

- On the eve of International Coastal Clean-Up Day, which is celebrated across 100 countries since 1986, Union Ministry of Environment, Forest and Climate Change (MoEFCC).
- For the first time, eight beaches of India are recommended for the coveted International eco-label, the Blue flag certification.
- The recommendations are done by an independent National Jury composed of eminent environmentalists & scientists.
- Blue Flag beaches are considered the cleanest beaches of the world.
- The eight beaches are
 - Shivrajpur in Gujarat
 - Ghoghla in Daman&Diu
 - Kasarkoda and Padubidri beach in Karnataka
 - Kappad in Kerala
 - Rushikonda in Andhra Pradesh
 - Golden beach of Odisha and
 - Radhanagar Beach in Andaman and Nicobar

'Blue Flag' certification

- 'Blue Flag' certification is awarded by an eminent international jury, which comprises members of the United Nations Environment Programme (UNEP), United Nations World Tourism Organization (UNWTO), Denmark-based non-profit Foundation for Environmental Education (FEE) and International Union for Conservation of Nature (IUCN).
- It also sets stringent environmental, educational, safety-related and access-related criteria that applicants must meet and maintain.
- This certification can be obtained by a beach, marina, or sustainable boating tourism operator, and serves as an eco-label.
- It is awarded annually to beaches and marinas in FEE member countries.

Blue Flag programme

- The Blue Flag programme was started in France in 1985 and areas out of Europe in 2001.
- The programme promotes sustainable development in freshwater and marine areas through four main criteria:
 - water quality,
 - environmental management,
 - environmental education and
 - safety
- Forty-seven countries currently participate in the program, and 4,573 beaches, marinas, and boats have this certification.

<p>WHAT SHAILESH NAYAK PANEL SUGGESTED Area between 500m line and hazard line should be the hazard management zone</p> <p>CRZ NOTIFICATION 2018 CRZ is limited to the first 500m of land from HTL and not till the hazard line</p> <p>WHAT IT MEANS Unregulated development can be carried out in the area that falls beyond 500m from the coast, even if it is hazard-prone</p>	<p>zone (NDZ)</p> <p>WHAT SHAILESH NAYAK PANEL SUGGESTED No change</p> <p>CRZ NOTIFICATION 2018 Land area till 50m or width of the water body, whichever is less, is included in CRZ as NDZ</p> <p>WHAT IT MEANS The NDZ has been reduced</p>	<p>WHAT SHAILESH NAYAK PANEL SUGGESTED The government should take initiatives to promote eco-tourism in ecologically sensitive areas</p> <p>CRZ NOTIFICATION 2018 CRZ-I is divided into two categories, and eco-tourism activities such as mangrove walks, nature trails, etc are allowed in accordance with the eco-tourism plan. The plan will be a part of the CZMP.</p> <p>WHAT IT MEANS It will increase tourism load on coastal areas</p>	<p>notification was passed)</p> <p>WHAT SHAILESH NAYAK PANEL SUGGESTED Suggests application of the prevailing town and country planning norms for construction and reconstruction of buildings in CRZ-II areas. Doesn't comment on FSI and FAR</p> <p>CRZ NOTIFICATION 2018 Applies the town and country planning norms, FSI and FAR as changed from time to time</p> <p>WHAT IT MEANS It means more built-up area and less open space</p>	<p>WHAT SHAILESH NAYAK PANEL SUGGESTED Suggests construction of houses for local communities in CRZ-III areas be allowed beyond the NDZ (50m or 200m from HTL)</p> <p>CRZ NOTIFICATION 2018 Allows construction of houses for local communities in CRZ-III areas beyond the NDZ (50m or 200m from HTL)</p> <p>WHAT IT MEANS Moving closer to the sea will put more lives and property at stake during natural disasters</p>
---	---	--	--	--

(Source: Centre of Policy Research - Namati Environmental Justice Program)

What activities are permitted in the CRZ of certain beaches?

- Environment Ministry has relaxed Coastal Regulation Zone (CRZ) rules in 2018, that restrict construction near beaches to help States construct infrastructure and enable them to receive 'Blue Flag' certification.
- According to the notification issued by MOEFCC, the following activities and facilities would be permitted in the CRZ of the beaches, including islands, subject to maintaining a minimum distance of 10 meters from the High Tide Line (HTL):
- Portable toilet blocks, change rooms and shower panels;
- Greywater treatment plant;
- Solid waste management plant;
- Solar power plant;
- Purified drinking water facility;
- Beach access pathways;
- Landscaping lighting;
- Seating benches and sit-out umbrellas;
- Outdoor play / fitness equipment;
- CCTV surveillance and control room;
- First aid station;
- Cloakroom facility;
- Safety watch towers and beach safety equipment;
- Beach layout, environment information boards and other signages;
- Fencing, preferably vegetative;
- Parking facilities;
- Entry gate, tourist facilitation centre; and
- Other associated facilities or infrastructure, as per requirements of Blue Flag Certification.
- These activities and facilities would be exempt from prior clearance under the provisions of CRZ Notification, Island Protection Zone Notification and Island Coastal Regulation Zone Notifications.

BEAMS

- It is India's eco-label.
- Ministry of Environment has launched the "BEAMS" (Beach Environment & Aesthetics Management Services) program under its ICZM (Integrated Coastal Zone Management) project.
- Objective of BEAMS program is
 - to abate pollution in coastal waters,
 - promote sustainable development of beach facilities,
 - protect & conserve coastal ecosystems & natural resources, and
 - seriously challenge local authorities & stakeholders to strive and maintain high standards of cleanliness, hygiene & safety for beachgoers in accordance with coastal environment & regulations.
- This program promotes beach recreation in absolute harmony with nature.

Integrated Coastal Zone Management

- The concept of ICZM was introduced in 1992 during the Earth Summit at Rio de Janeiro.
- It is a coastal management process for the management of the coast using an integrated approach, regarding all aspects of the coastal zone, including geographical and political boundaries, in an attempt to achieve sustainability.
- Most of the coastal countries in the World have been adopting ICZM principles for managing their coastal zones.
- Adoption of ICZM principles for managing and sustainably developing our coastal regions is helping India in keeping with its commitments to international agreements on ICZM.
- Ministry of Environment, Forests & Climate Change launched the Integrated Coastal Zone Management (ICZM) activities in India to protect and conserve the coastal and marine ecosystems.

AIR QUALITY IN DELHI NCR

GS-III ENVIRONMENT

Context

- Ahead of the approaching winter season, when stubble burning peaks leading to dangerous levels of air pollution, Principal Secretary to the Prime Minister, Dr P K Mishra, chaired a meeting of the high level task force constituted to improve air quality in the National Capital Region of Delhi.

Dr P K Mishra high-level task force

- It will ensure proper precautionary and preventive measures to combat the causes of air pollution are taken well in time.

Outcomes of the meeting:

- The efforts and plan made by Punjab, Haryana and Uttar Pradesh for control of crop residue burning are examined in detail, including ground-level deployment and availability of machinery for in-situ management of crop residue.
- Measures related to the diversification of crops and strengthening of supply chains are also discussed.
- Focus on the needs of effective implementation of the existing in-situ management of crop residue scheme of Ministry of Agriculture by the states.
- State governments should ensure that the new machinery to be deployed in the current year should reach the farmers before the start of the harvesting season.
- To control stubble burning, an adequate number of teams are to be deployed at ground level and ensure that no stubble burning takes place, especially in Punjab, Haryana and UP.
- Government of Delhi was also asked to ensure measures to control local sources of pollution.
- Haryana and UP would prepare and implement similar site-specific action plans in their area falling under NCR.
- Focus should also be laid on compliance of emission norms by industries in the satellite industrial area.

Measures are taken to improve air quality in Delhi and NCR region

- The Graded Response Action Plan (Grap), is a set of curbs triggered in phases as the air quality deteriorates, which is typical of the October-November period.

Fight against pollution
A look into the city's Graded Response Action Plan to fight air pollution

STAGE 1 MODERATE-TO-POOR QUALITY AIR (PM _{2.5} above 61 µg/m ³ or PM ₁₀ above 101 µg/m ³) ● Mechanized sweeping, washing roads with water ● Enforcing ban on firecrackers, increased scrutiny of vehicles for pollution standards	STAGE 2 VERY POOR AIR (PM _{2.5} above 121 µg/m ³ or PM ₁₀ above 351 µg/m ³) ● Ban on diesel generators ● Parking fee to surge by 3-4 times ● Stop use of coal/firewood in eateries ● Urge people with respiratory or cardiac problems to stay inside	STAGE 4 EMERGENCY (also known as severe+, PM _{2.5} above 300 µg/m ³ or PM ₁₀ above 500 µg/m ³) ● Ban entry of trucks (except for essential items) ● Halt construction work ● Begin odd-even road scheme for private vehicles
	STAGE 3 SEVERELY POLLUTED AIR (PM _{2.5} above 250 µg/m ³ or PM ₁₀ above 430 µg/m ³) ● Increase frequency of road cleaning and washing ● Shut down of brick kilns ● Restrictions on operation of coal-based power plants in NCR	

SANDALWOOD SPIKE DISEASE (SSD)

GS-III ENVIRONMENT

Context

- Dreaded Sandalwood Spike Disease has resurfaced, seriously infecting natural habitats in Karnataka, Kerala.
- With between 1 and 5% of sandalwood trees lost every year due to the disease, scientists warn that it could wipe out the entire natural population if measures are not taken to prevent its spread.
- Any delay in arresting the trend may result in the disease spreading to cultivated sandalwood trees.
- It is significant to note that the price of Indian sandalwood and its oil has risen significantly since 1995 at a rate of 20% annually mainly due to depletion in production.

India's sandalwood trees

- This aromatic tree's natural habitats are Karnataka and Kerala.
- In 1792, Tippu Sultan had declared it a 'Royal Tree' of Mysuru.
- *Santalum album*, or Indian sandalwood, is a small tropical tree.
- It is native to southern India and Southeast Asia.
- Some cultures place great significance on its fragrant and medicinal qualities.
- However, the high value of the species has caused over-exploitation, to the point where the wild population is vulnerable to extinction.

About Sandalwood Spike Disease

- There is **no cure** for it. There is no other option but to cut down and remove the infected tree to prevent the spread of the disease.
- It caused by **phytoplasma — bacterial parasites** of plant tissues — which are transmitted by insect vectors.
- Spike disease is characterized by extreme reduction in leaf size accompanied by stiffening and reduction of internodes length.
- The major obstacle limiting research on phytoplasma disease is that the organism has not so far been isolated and cultivated in vitro.
- It was first reported in Kodagu in 1899. More than a million sandalwood trees were removed in the Kodagu and Mysuru region between 1903 and 1916.
- Impact of this disease in Karnataka is that, it has reduced the stock to 25% of its initial level between 1980 and 2000.
- The devastating impact in natural habitats resulted in sandalwood being classified as "vulnerable" by the International Union for Conservation of Nature in 1998.

WHALE MASS STRANDINGS

GS-III ENVIRONMENT

Context

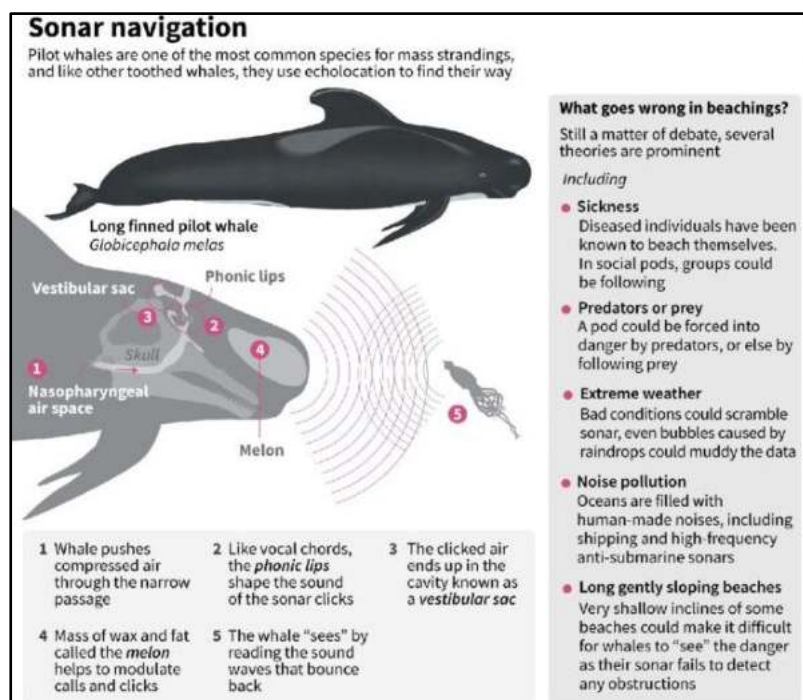
- Over 450 long-finned pilot whales have died in Australia, it is the biggest stranding of whales on record in Australia.

Why do whales beach themselves?

- Whales are known to strand themselves on beaches across the world and they do so singularly or in groups.
- While individual strandings are mostly attributed to injury or sickness, it is not clear why exactly whales beach themselves in groups.

Theories explaining this behaviour

1. Some whales follow schooling fish or other prey into shallow waters, which causes the whales to become disoriented, as a result of which they get stranded.
2. Panic from being trapped by a predator such as killer whales or sharks.



3. Whales might be drawn to land by prey-rich currents.
4. Shape of the beach and the coastline could also have a role to play. For instance, if the beach has gently-sloping shorelines, whales that are dependent on echolocation for navigation can be deceived.

What happens when whales are stranded?

- According to Australia, the species that most often get stranded are those that use **echolocation** or sonar for navigation, such as pilot and sperm whales.
 - **Echolocation** is a technique used by bats, dolphins and other animals to determine the location of objects using reflected sound. This allows the animals to move around in pitch darkness, so they can navigate, hunt, identify friends and enemies, and avoid obstacles.
- According to Tasmania's aerial survey, most of the stranded whales appear to be dead. To save the ones that are still alive, rescue mission was carried to guide them back into the water.


Are such strandings common?

- Whale stranding is neither an uncommon nor a recent phenomenon.
- While dead individuals would naturally wash up ashore but mass beaching has baffled humans since at least 300 BC.
- Romans thought stranding was a whale's punishment for offending Neptune, the god of the seas.
- Before this, the largest stranding that has occurred in Tasmania happened in 1935 when over 294 whales were stranded.

Long-finned pilot whales

- Long-finned pilot whales are very social, living in large schools of hundreds of animals separated into close-knit pods of 10 to 20 individuals.
- Long-finned pilot whales, like all marine mammals, are protected under the **Marine Mammal Protection Act**.
 - The Marine Mammal Protection Act (MMPA) was the first act of the United States Congress to call specifically for an ecosystem approach to wildlife management.
- Long-finned pilot whales prefer deep temperate to subpolar oceanic waters
- This species has been described as "**anti-tropical**."

Long-Finned Pilot Whale
Globicephala melas



Protected Status

CITES APPENDIX II
Throughout Its Range

MMPA PROTECTED
Throughout Its Range

Quick Facts

WEIGHT	2,900 to 5,000 pounds
LIFESPAN	35 to 60 years
LENGTH	19 to 25 feet
THREATS	Entanglement, Disease, Chemical contaminants, Ocean noise

Conservation status

Extinct Threatened Least Concern

EX
EW
CR
EN
VU
NT
LC

Least Concern (IUCN 3.1)^[2]



CAMPAIGN TO REMOVE LANTANA: RAJASTHAN

GS-III ENVIRONMENT

Context

- A special drive to uproot the invasive lantana bushes in the famous **Sajjargarh wildlife sanctuary** in Rajasthan's Udaipur district has helped in ecological restoration of grasslands and saved biodiversity.

'Mission lantana'

- It was a month-and-a-half-long campaign to uproot the invasive lantana and accompanied by the plantation of native species on the cleared patches of land.
- The drive involved collective efforts and 'shram daan' (voluntary physical work) by the forest officials, police personnel, wildlife lovers, representatives of voluntary groups and local villagers.
- About 10 hectares of land has been cleared planted and over 500 saplings were planted in the cleared pockets to create vegetation for herbivores.

Why this mission adopted?

- Lantana Camara has covered over almost 50% of the sanctuary tracts of land, stopping the natural light and nutrition for flora and fauna.
- The toxic substance in its foliage and ripe berries affected the animals, while its expansion stopped the natural growth of grass and other shrubs.

- It affects the herbivores, as they did not get sufficient forage, the prey base for carnivorous animals was declining, leading to ecological disturbances in the food chain.
- Lantana bushes had taken over almost 50% of the sanctuary.

Lantana

- It is a genus of about 150 species of perennial flowering plants that are native to tropical regions of the Americas and Africa.
- Lantana (Lantana Camara) has become one of the world's most invasive weeds.
- It is highly adaptable, growing in a wide range of habitats from sea level to mountains, rainfall areas from 1000-4000mm/yr, and hinders seedling growth of other plants.
- **Control measures** include fire, mechanical, chemical, biological and combinations.
- Lantana eradication and management is very expensive.
- Lantana has both positive and negative impacts on ecosystems. Which include the ability to hinder some and increase regeneration of some species, increase water runoff and decrease or increase soil erosion. It provides cover and food for some wildlife and livelihood benefits to local communities (handicrafts, paper, furniture).

Sajjagarh wildlife sanctuary

- This small sanctuary in the southern Aravalli hills is home to a large number of herbivores.
- The area was made a wildlife sanctuary in 1987.
- In 2017, an area of 28.7 square kilometres around the boundary of the sanctuary was declared to be an **Eco-Sensitive Zone** by the Government of India.

Eco-Sensitive Zones (ESZs)

- Also known as Ecologically Fragile Areas (EFAs) are areas in India notified by the Ministry of Environment, Forests and Climate Change (MoEFCC), Government of India around Protected Areas, National Parks and Wildlife Sanctuaries.
- The purpose of declaring ESZs is to create some kind of "**shock absorbers**" to the protected areas by regulating and managing the activities around such areas.
- They also act as a transition zone from areas of high protection to areas involving lesser protection.

EARLY MIGRATION OF BUTTERFLIES

GS-III ENVIRONMENT

Context

- Butterflies are migrating early in southern India this year.

About

- The annual migration of butterflies from the hill ranges of the Eastern Ghats towards the Western Ghats is an early phenomenon this year.

Migratory paths of butterflies in South India

Normal course

- Usually, butterfly migration in south India begins in October-November, with the onset of the northeast monsoon, from the plains to the Ghats.
- In April-June, just before the advent of the southwest monsoon from the Ghats to the plains
- The southwest monsoon is the season for the breeding of butterflies after which they migrate.

This year course change

- This year, the first migratory sighting was recorded in the Parambikulam Tiger Reserve in Palakkad district by forest watchers on July 14.
- Butterfly migration has also been recorded in Mysuru, Bengaluru, Kolar and Coorg districts in Karnataka.
- The migration started early after a gap of eight years.
- The Eastern Ghats complex of the Yercaud hills (Shevaroy hills), Pachamalai, Kolli hills, Kalvarayan hills is the major originating places for the migrating species.

Reasons for early migration

- Change in rainfall pattern
- Considerable increase in the number of sunny days
- Favourable conditions on the feeding ground
- Population outburst

Major species of butterflies that are involved in the migration

- Dark Blue Tiger, Blue Tiger, Common Crow and the Double-branded (commonly known as tigers and crows), Lime Swallowtail, Lemon Pansy, Common Leopard, Blue Pansy, Common Emigrant and Lemon Emigrants.

Concern

- Thousands of butterflies had died of vehicle hits along the migratory path.

Parambikulam Tiger Reserve

It is a well protected ecological portion in the Nelliampathy - Anamalai landscape of the Southern Western Ghats in India. It is located in the Palakkad District of Kerala. It is one of the biodiversity hot spot in the world supports diverse habitat types and endemism.

www.iasgyan.in

IASGYAN
PREDICT THE UNPREDICTABLE
An initiative of **APTI PLUS**

**OUR ONLINE
PRELIMS TEST SERIES
PROGRAMME**

**UPSC
CSE
2021**

**OPSC
OCS
2020**

**WBCS
2021**

Why in news?

- The Delhi High Court has granted 12 weeks to the Union government to decide on whether to scrap or retain the dual control structure for Assam Rifles.
- Presently, it comes under both the **Ministry of Home Affairs (MHA)** and the **Ministry of Defence (MoD)**.

What is the Assam Rifles?

- It is one of the six Central Armed Police Forces (CAPFs) under the administrative control of Ministry of Home Affairs (MHA).
- The other forces being the Central Reserve Police Force (CRPF), the Border Security Force (BSF), the Indo-Tibetan Border Police (ITBP), the Central Industrial Security Force (CISF) and the Sashastra Seema Bal (SSB).
- It is tasked with the maintenance of law and order in the **North East** along with the Indian Army and also guards the **Indo-Myanmar border** in the region.

How is it unique?

- It is the only paramilitary force with a **dual control structure**.
- The administrative control of the force is with the MHA, its operational control is with the Indian Army, which is under the MoD.
- Salaries and infrastructure for the force are provided by the MHA, but the deployment, posting, transfer and deputation of the personnel is decided by the Army.
- The force is the only central paramilitary force (CPMF) in the real sense as its operational duties and regimentation are on the lines of the Indian Army.
- Its recruitment, perks, promotion of its personnel and retirement policies are governed according to the rules framed by the MHA for CAPFs.

Why do both MHA and MoD want full control?

MHA arguments

- All the border guarding forces are under the operational control of the ministry and so Assam Rifles should come under MHA.
- This will give border guarding a comprehensive and integrated approach.
- Assam Rifles function on the pattern set during the 1960s and guard the Indo-Myanmar border on the lines of other CAPFs.

Army arguments

- Assam Rifles has worked well in coordination with the Army and frees up the armed forces from many of its responsibilities to focus on its core strengths.
- It was always a military force and not a police force.
- It argues that giving the control of the force to MHA or merging it with any other CAPF can confuse the force and **jeopardise national security**.

What has been the contribution of Assam Rifles?

Pre-Independence role

- Assam Rifles is the oldest paramilitary force raised way back in 1835 in British India with just 750 men.
- It has gone on to **fight in two World Wars**.
- Raised as a militia to protect British tea estates and its settlements from the raids of the NE tribes, the force was first known as Cachar Levy.
- Given its contribution in opening the region to administration and commerce, it is also known as the "right arm of the civil and left arm of the military".

The post-Independence role of the Assam Rifles

- Combat role during the **Sino-Indian War of 1962**
- Operating in a foreign land as part of the Indian Peace Keeping Force (IPKF) to Sri Lanka in 1987 (**Operation Pawan**).
- As an anti-insurgency force against militant groups in the North East.

Y PLUS CRPF SECURITY COVER

GS-III SECURITY

Why in news?

- Kangana Ranaut has been accorded Y-plus category of CRPF security by the Home Ministry.

Who all can get Y-plus category protection?

- It is informally called "VIP security", and is generally given to someone who holds a position of consequence either in the government or in civil society.

Who decides the level of protection that is to be given?

- The level of security needed by any individual is decided by the Ministry of Home Affairs.
- The decision is based on inputs received from intelligence agencies which include the Intelligence Bureau (IB) and Research and Analysis Wing (R&AW).
- Certain individuals that hold important office in government, are automatically entitled to security cover. Which include
 - Prime Minister and his immediate family
 - Home Minister and
 - officials such as the National Security Advisor

What are the various levels of protection?

- There are broadly six categories of security cover: X, Y, Y-plus, Z, Z-plus, and SPG (Special Protection Group).
- There are various kinds of security cover even within these levels. These include security of residence, mobile security, office security, and inter-state security.
- SPG** is meant only for the PM and his immediate family, other protection categories can be provided to anyone about whom the Centre or state governments have inputs of a threat.
- The number of personnel guarding the protectee differs from category to category.
 - ✓ The **X** category is the most basic level of protection. X category on average entails just one gunman protecting the individual.
 - ✓ **Y** category has one gunman for mobile security and one (plus four on rotation) for static security.
 - ✓ **Y-plus** has two gunmen (plus four on rotation) for mobile security and one (plus four on rotation) for residence security.
 - ✓ **Z** has six gunmen for mobile security and two (plus 8) for residence security.
 - ✓ **Z-plus** protectees have 10 security personnel for mobile security, and two (plus 8) for residence security.

So, which are the forces engaged in VIP security?

- For VIPs other than the PM, the government has **mandated** the National Security Guard (NSG), Central Reserve Police Force (CRPF) and the Central Industrial Security Force (CISF) to provide security cover.
- The government has intended to reduce the burden of VIP security on the NSG, whose core function is counter-terrorism operations.

Who pays for the cost of the security cover?

- Anyone to whom the government provides security after assessment by intelligence agencies gets the protection for free.
- The government can choose to charge a private individual for their security cover even after assessing a threat to them.

SPECIAL FRONTIER FORCE

GS-III SECURITY

What is the Special Frontier Force (SFF)?

- It was raised by the Intelligence Bureau in the immediate aftermath of the 1962 China-India war.
- It recruited Tibetan exiles and was initially named Establishment 22.
- It falls under the purview of the **Cabinet Secretariat**.
- It is headed by an Inspector General, an Army officer of the rank of Major General.
- The units comprising the SFF are known as **Vikas battalions**.

Historical background

- It is commonly believed that the SFF was raised by India in coordination with US intelligence agencies.

Did US have any say in SFF's role?

- The US had no voice in the command of the SFF.

Are SFF units part of the Army?

- SFF units are not part of the Army but function under its operational control.
- SSF units have their rank structures, of equivalent status with Army ranks.
- However, they are special forces personnel highly trained for a variety of tasks.
- Women soldiers too form part of SFF units and are given the same training as men.

What was the SFF's role in the 1971 war?

- In 1971, During Operation Eagle, the SFF operated in the Chittagong hill tracts to neutralize Pakistan Army positions and help the Indian Army advance.

What other major operations have SFF units taken part in?

- Operation Blue Star in Golden Temple Amritsar,
- the Kargil conflict, and
- counter-insurgency operations.

DEFENCE ACQUISITION PROCEDURE 2020

GS-III SECURITY

Context

- The final form of the Defence Acquisition Procedure (DAP) - 2020 unveiled by Defence Minister DAP 2020 will be applicable with effect from October 1, 2020.

THE LEASE OPTION

Armed forces now have the option to lease any equipment they require. This would:-

- Bring down upfront costs
- Give the forces access to the latest equipment
- Bring flexibility into operational plans by leasing out equipment for short intervals if needed

Do away with offsets for non-competitive deals

Make sure that future government-to-government or single-vendor contracts do not have offsets

SAVE 8-10% COSTS ON THE CONTRACT

The Options

Systems that could be processed under this model are land attack vehicles and UAVs from the US that could be used in Ladakh and light transport aircraft

FUTURE COURSE

Multi-vendor competitive acquisitions to still retain offsets clause

Over time, offsets will narrow down as the most acquisitions to be moved through Make in India route

Defence Procurement Procedure

- Defence Procurement Procedure (DPP) is renamed as Defence Acquisition Procedure.
- DPP was promulgated in 2002.
- It has been revised to provide impetus to the growing domestic industry and achieve enhanced self-reliance in defence manufacturing.

Category	DPP 2016	DAP 2020
Buy (Indian-IDDM)	Min 40%	Min 50%
Buy (Indian)	Min 40%	Indige-nous design – Min 50% Other-wise – Min 60%
Buy & Make (Indian)	Min 50% of Make	Min 50% of Make
Buy (Global – Manufacture in India)	-	Min 50% of Buy plus Make
Buy (Global)	-	Min 30% for Indian vendors

MAKE-IN-INDIA PUSH

- New DAP seeks to empower domestic defence industry through 'Make in India' initiative
- MoD officials say 15-year-old offsets policy "loaded extra costs" into contracts
- So, offsets will not be applicable in govt-to-govt, inter-governmental agreement & ab initio single-vendor deals

DAP 2020

- It enables the notification of a **List of Weapons** or Platforms that will be **banned for import**.

- It focuses on FDI in defence manufacturing and indigenization of the manufacturing prices.
- A **new category 'Buy (Global – Manufacturer in India)'** is created to encourage foreign original equipment manufacturers (OEMs) to setup 'manufacturing or maintenance entities' through its subsidiary in India while enabling requisite protection to the domestic industry.
- Setting up of a **project management unit (PMU)** has been mandated to support contract management.
 - The PMU will facilitate obtaining advisory and consultancy support in specified areas to streamline the acquisition process to ensure time-bound defence procurement process and faster decision making.
- There will be **no offset clause** in government-to-government, single vendor and Inter-Governmental Agreements (IGA).
 - Under the offset clause, foreign companies are required to invest part of their deal value in the country and meant to improve domestic defence manufacturing.
- It also introduces a **new category for leasing of military equipment** to substitute huge initial capital outlays with periodical rental payments.
- Procedures for trials and testing have also been rationalised in the DAP 2020.
- Scope of trials will be restricted to the physical evaluation of core operational parameters, other parameters may be evaluated based on vendor certification, certification by accredited laboratories, computer simulations of parameters.

Significance

- It is aligned with the government's vision of Atmanirbhar Bharat and giving an impetus to the Make in India initiative.
- DAP 2020 has adequately included provisions to encourage FDI to establish manufacturing hubs both for import substitution and exports while protecting interests of the Indian domestic industry.
- Will give a boost to the time-bound defence procurement process and faster decision making.
- **Simplification of trial procedures**, the DAP 2020 emphasises the need to conduct trials to nurture competition based on the principles of transparency, fairness and equal opportunities to all.
- **Ease of doing business**-- key focus areas of the review is to implement 'ease of doing business' with emphasis on simplification, delegation and making the process industry-friendly.
- **Procedural changes**--Single-stage accord of Acceptance of Necessity (AoN) in all cases up to Rs 500 crore has been instituted thereby reducing time.

www.iasgyan.in

IAS GYAN
An initiative of **APTI PLUS**

OUR MAINS PROGRAMME

- MAINS ASSESSMENT PROGRAMME TEST SERIES FOR CSE MAINS 2020
- UPSC MAINS 2020 CAPSULE MODULE
- MAINS 2020 ANSWER WRITING EVALUATION PROGRAMME

Context

- Recently, the **News Broadcasters Association (NBA)** has told the Supreme Court to make its code of ethics against airing malicious, biased and regressive content applicable to all TV news channels.

Need for Code of Ethics

- Genuine reportage has become a casualty** due to a cocktail of commercial interests, ideological leanings and insane scramble for breaking stories – **Honourable Vice President, Shri Venkaiah Naidu**.
- He had further pointed out that **sensationalism, paid news and biased coverage** has become the bane of modern-day journalism.

Press Council of India Report

- Justice GN Ray had rightly pointed out the growing negative trends in Indian Media:
- Corporatization of Media:** Barring a few, most media houses aim to derive more and more profits like commercial enterprises. They lobby the agenda of big corporate houses from which large revenue is obtained for advertisements. The un-reached sections being at the bottom of economic pyramid are not the target of mass media **both for reach as well as for concerns**.
 - Monopoly of Big Media Houses: Result:** Dissemination of only selective views and information is subtly ensured.
 - Malpractices and Corruption:** Yellow journalism and blackmailing were the known forms of corruption in journalism. But in today's media functioning, implicit form of corruption is creating greater mischief. The promotion of certain politicians and political groups, business magnets, commercial and industrial interests, through induced news has ushered in an era of tainted communication.
 - Paid News Syndrome: Result-** Misinformation and dissemination of distorted news. Media houses project views of a particular party or group in the guise of news for monetary consideration.
 - Trial by Media and incorrect reporting of court cases:** Being disturbed by this growing menace, the Supreme Court Legal Services Authority in association with Press Council of India, Editors' Guild of India and Indian Law Institute organized national level seminars to evolve remedial measures. A training programme for reporters of court proceedings was also arranged.
 - Devaluation of the Office of Editor:** Today, the office of editor has been marginalized and the editor has very little or no says about the contents of the reporting.

Beyond Bad Apples: the dynamics of Ethical Erosion

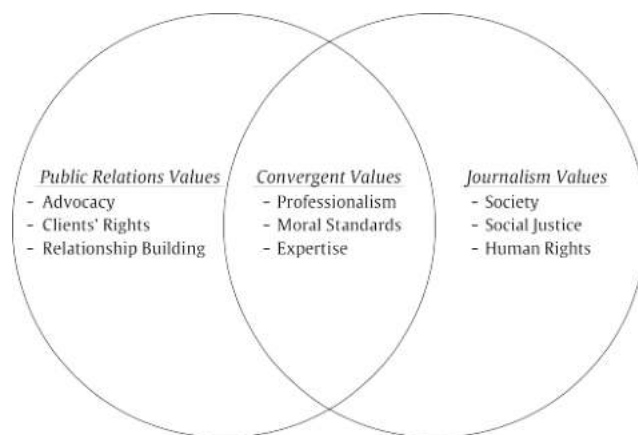
- The mainstream media (with a few honorable exceptions) is insensitive to the real concerns of flesh-and-blood people, especially the vast majority of Indians who are poor and underprivileged.
- No less disturbing is the censorship of stories written from the standpoint of the underprivileged and the vulnerable.
- There is also blatant partisan support in large sections of the media for various political groupings.
- Other issues: (As pointed out by Press Council of India Chairman- Markandey Katju)
 - ✓ diversion from serious to non-serious issues.
 - ✓ dividing people communally
 - ✓ promoting superstition and obscurantism
 - ✓ Insulting journalism and name-calling has become a trend.
- Life threats:** 14 journalists, including Gauri Lankesh, Shujaat Bukhari, have met been killed while on duty.
- Spreading of Communal Hatred**
- Example: Telecast of a programme 'Bindas Bol' on Sudarshan TV containing objectionable content against the Muslim entries into the civil services.
- Suresh Chavhanke, Sudarshan News editor-in-chief, booked on charges of spreading communal hatred.
- NDTV's 2008 broadcast of a programme anchored by Barkha Dutt on "Hindu Terror" showing a "Hindu Saint" with a tilak, chillam and a trishul. Another programme "Is Saffron Terror real" was also hosted by Ms. Dutt on NDTV in 2018.

2020 World Press Freedom Index Findings

- In **World Press Freedom Index 2020**, India ranked 142 out of 180 countries.
- No murders of journalists took place in India in 2019, as against six in 2018. Thus, the security situation for the country's media might seem to have improved.
- However, there have been constant press freedom violations, including police violence against journalists, ambushes by political activists, and reprisals instigated by criminal groups or corrupt local officials.

Significance of Ethical Journalism

- Media is the **fourth pillar of democracy**.
- The core values of ethical journalism are more important than ever today, as we fight for quality and democracy in the media in the digital age.
- Commitment to ethics is essential to build public trust.**
- Media plays a **major role in informing the public** and thereby **shape perceptions**.



Way ahead

- The Press Council of India (PCI) says that "electronic media, TV news channels, social media i.e. Whatsapp/ twitter/Facebook comes under the jurisdiction of the Press Council of India. Section 14 of the Press Council Act, 1978, Act, empowers the Council to warn, admonish or censure media.
- However, "More teeth" should be given to PCI.** The ambit of the regulatory body should be expanded over the electronic media and the Internet. For this legislation should be introduced in Parliament.
- Among the various suggestion made by the Press Council earlier for taking action against those who violate journalistic ethics are:
 - ✓ imposition of fine,
 - ✓ withdrawal of government advertisement,
 - ✓ suspension/cancellation of license/accreditation.
- NBA suggested that the court should direct the government to include its ethical code in the **Programme Code of the Cable Television Networks Rules, 1994**.
- All news channels, whether they are NBA members or not, will then have to follow the Programme Code.
- NBA further said that the News Broadcasters Services Authority (NBSA) **should be granted recognition as an "independent self-regulatory mechanism"** to receive and deal with complaints.
- The orders passed by the NBSA **should be made binding and enforceable on the channels**.
- Submission to the NBSA regulatory mechanism should be made mandatory for granting/renewal of uplinking/downlinking of TV Channel permissions by the government.
- The government should take into consideration any previous orders passed by the NBSA while granting or renewing uplinking/downlinking permissions to TV Channels.

Conclusion

- Media freedom is generally accepted as a **corner stone of modern democratic society**.
- However, the media should be responsible in what and how it reports and also clearly distinguish disseminating information from analysis and opinions.
- The press in India has always been at the forefront of national life. Even though there has been a considerable erosion of ethics over the decades since independence, the basic values adhered to by the Indian Media over the ages, still continue to inspire.
- In a multi religious, multilingual and multi ethnic denominations comprising the polity of India, the social fabric is quite delicate. Journalists must be very sensitive to this delicate and fragile social structure and should refrain from doing any act which may even remotely disturb the equilibrium of the society.
- The necessity for media **to function effectively as the watchdog of public interest** was recognized in the freedom struggle.
- The founding fathers of the Republic realized the need to balance the freedom of expression of the press with a sense of responsibility while such freedom is exercised.
- Adherence to accepted norms of journalistic ethics and maintenance of high standards of professional conduct was deemed to be a natural corollary.
- Gandhi ji, a journalist himself, cautioned that **"an uncontrolled pen serves but to destroy."**
- Jawaharlal Nehru warned: **"If there is no responsibility and no obligation attached to it, freedom gradually withers away".**

The News Broadcasters Association is a **private association of different current affairs and news television broadcasters in India**. It was established by leading Indian news broadcasters in 3 July 2007. The Association was set up to deal with ethical, operational, regulatory, technical and legal issues affecting news and current-affairs channels.

The Press Council of India is a **statutory, adjudicating organization in India formed in 1966 by its parliament**. It is the self-regulatory watchdog of the press, for the press and by the press, that operates under the Press Council Act of 1978. The Council has a chairman – traditionally, a retired Supreme Court judge, and 28 additional members of which 20 are members of media, nominated by the newspapers, television channels and other media outlets operating in India. In the 28 member council, 5 are members of the lower house (Lok Sabha) and upper house (Rajya Sabha) of the Indian parliament and three represent culture literary and legal field as nominees of Sahitya Academy, University Grant Commission and Bar Council of India.

SHORT NEWS ARTICLES

GENERAL STUDIES-I

Viswanatha Satyanarayana

Context

- Recently, 125th Birth Anniversary celebrations of Kavi Samrat Shri Viswanatha Satyanarayana were celebrated.

About

- Shri Viswanatha Satyanarayana was a 20th century Telugu writer. He was the first writer to impart a true Teluguness to the Ramayana.
- Through his works, he had **highlighted the importance of imparting learning in the mother tongue**, preserving culture and protecting the nature.
- Popular works:** Ramayana KalpaVrukshamu (Ramayana the wish-granting divine tree), Kinnersani Patalu (Mermaid songs) and the novel Veyipadagalu (The Thousand Hoods).

Yanomami people

Context

- The Yanomami people, have been threatened for several decades by illegal gold miners who invade their land and bring diseases.

About

- Yanomami are a group of approximately 35,000 indigenous people who live in some 200–250 villages in the Amazon rainforest on the **border between Venezuela and Brazil**.
- They are the **largest relatively isolated tribe in South America**. The Yanomami practise an ancient communal way of life.
- They live in large, circular houses called **yanos or shabonos**, some of which can hold up to 400 people. It is a Yanomami custom that a hunter does not eat the meat he has killed.
- The Yanomami consider all people to be equal, and do not have a chief.

Sarvapalli Radhakrishnan

- Indian philosopher, academic, and statesman who served as the first Vice President of India (1952–1962) and the second President of India.
- Defended Hinduism against what he called "uninformed" Western criticism.
- Influential in shaping the understanding of Hinduism, in both India and the west, and earned a reputation as a bridge-builder between India and the West.
- One of the most prominent spokesmen of Neo-Vedanta. His metaphysics was grounded in Advaita Vedanta, but he reinterpreted Advaita Vedanta for a contemporary understanding.
- Famous works: **The Philosophy of Rabindranath, Living with a purpose, The philosophy of Hinduism, The pursuit of Truth, The Philosophy of the Upanishads, Eastern Religions and Western Thought, etc.**

K.N. Dikshit Committee

- The government has formed an expert committee for conducting a study on the origin and evolution of Indian culture dating back to around 12,000 years ago.
- The committee will be chaired by K.N. Dikshit. The 16-member committee will also include Indian Archaeological Society, New Delhi and former Joint Director General, Archaeological Survey of India, among others.

Odisha's Kandhamal Haldi

Context

- With COVID-19 sweeping across the region, farmers in Odisha have been left in the lurch due to procurement of the Kandhamal Haldi herb being badly affected by the pandemic.

About

- KandhamalHaldi had received **geographical indication (GI) tag** last year.
- KandhamalHaldi— has **more oleo resin and volatile oil content compared to other turmeric.**
- The unique properties in Kandhamal haldi give it a **strong aroma and a higher medicinal value.**
- Kandhamalhaldi is popular in foreign countries and 95 per cent of Kandhamal Apex Spices Association for Marketing (KASAM's) procurement is exported to the US, Europe, Australia, Japan and Korea.
- But the lockdown has forced exporters to not purchase turmeric.

Subramaniam Bharati

- He was a Tamil writer, poet, journalist, Indian independence activist, social reformer and polyglot.
- Popularly known as "MahakaviBharathi" ("Great Poet Bharathi"), he was a pioneer of modern Tamil poetry.
- His numerous works included fiery songs kindling patriotism during the Indian Independence movement.
- Works: **Gnanaratham (The Chariot of Wisdom), Swadesamitran and India (weekly).**
- Poems : **KannanPattu, NilavumVanminumKatrum, PanchaliSabatam, KuyilPattu and SudesaGeethangal.**
- He was **against caste system** and **condemned those Shastras that denigrated women.**
- Bharati participated in Benaras Session (1905) and Surat Session (1907) of the Indian National Congress.

Parliament of World Religion

Context

- September 11, marked the 127th anniversary of Swami Vivekananda's speech in Parliament of World Religion, Chicago.

About

- The Parliament of Religions opened on 11 September 1893 at the World's Congress Auxiliary Building which is now The Art Institute of Chicago. It ran from 11 to 27 September, making it the first organized interfaith gathering.
- Swami Vivekananda, represented Hinduism as a delegate, introducing Hinduism at the opening session of the Parliament on 11 September.
- **Participants in the first conference:** Jain preacher Virchand Gandhi, Buddhist preacher AnagarikaDharmapala; SoyenShaku, the "First American Ancestor" of Zen; Swami Vivekananda represented Hinduism; Christianity was represented by G. Bonet Maury; Islam was represented by Mohammed Alexander Russell Webb; Theism or the BrahmoSamaj was represented by Pratap Chandra Majumdar; The Theosophical Society was represented by the Vice-President of the society, William Quan Judge and by activist Annie Besant.
- So far, six international modern Parliaments have been hosted.

Bhagat Singh (113th Birth Anniversary)

- He was an Indian socialist revolutionary. Initially he supported Non-Cooperation Movement. When Gandhiji withdrew the movement after ChauriChaura incident, Bhagat Singh became a revolutionary nationalist.
- In 1926, he **founded the Naujawan Bharat Sabha.**
- In 1928, he established the **Hindustan Socialist Republican Association (HSRA)** along with Sukhdev, Chandrashekhar Azad and others.
- **Lahore Conspiracy Case:** To avenge the death of LalaLajpatRai;Bhagat Singh & associates wanted to kill Police James Scott but by mistake they killed J P Saunders (another police official).
- **Central Assembly Bombing Case:** On April 8, 1929, Bhagat Singh, along with BatukeshwarDutt, hurled two bombs inside the Central Legislative Assembly in New Delhi **to protest against Public Safety Bill.**
- Nobody was killed & the bombs they flung were not meant to kill but to make the deaf hear.
- Bhagat Singh was arrested and charged in the Saunders murder case, along with Rajguru, Sukhdev and others. The trio was hanged on 23rd March 1931. (observed as Martyr's Day)
- The aim of Bhagat Singh was to bring about a revolution which would end all exploitation of man by man.

Bhagat Singh: Bombs and pistols do not make a revolution. The sword of revolution is sharpened on the whetting stone of ideas.

Vishnupada Temple

Context

- Recently, Patna High Court reprimanded the private managing body of Vishnupad temple in Gaya asking it to manage the temple properly for lakhs of devotees who visit every year.

About

- Vishnupada Temple is an ancient temple in Gaya, Bihar, dedicated to Lord Vishnu.

- This temple is located **along the Falgu River**, marked by a footprint of Lord Vishnu known as Dharmasila, incised into a block of basalt.
- The present day structure was rebuilt by **Devi Ahilya Bai Holkar, the ruler of Indore**,

Chendamangalam Saree

Context

- Care 4 Chendamangalam, an initiative is supporting 2018 Kerala flood-affected weavers, by holding a saree exhibition in Chennai.

About

- Kerala has three clusters that have been given a Geographical Indication (GI) tag. These three famous clusters are Balaramapuram, Chendamangalam and Kuthampully.
- The second cluster called Chendamangalam is famous for saris. The **GI-tagged Chendamangalam sari is recognisable by its puliyilakara border**, a thin black line that runs abreast with the sari's selvedge.
- The saris are made from the fine-count cotton yarn of 120s, 100s and 80s. The sarees have extra-weft chuttikara and stripes and checks of varying width.

GI Tag

- A geographical indication (GI) is a name or sign used on certain products which corresponds to a specific geographical location or origin.
- GIs have been defined **under WTO's Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement**.
- GI tag ensures that none other than those registered as authorised users are allowed to use the popular product name. Darjeeling tea became the first GI tagged product in India, in 2004-2005.

Channapatna Toy

Context

- Channapatna toy industry has been struggling since March due to the Covid-19 pandemic.

About

- Channapatna toys are a particular form of **wooden toys** that are manufactured in the town of Channapatna in **Karnataka**.
- GI tagged Channapatna Toys are also known as **Gombegala Ooru**.
- Traditionally, the work involved lacquering the wood of the **Wrightia tinctoria** tree. Vegetable dyes are used in the colouring process.
- The **origin** of these toys **can be traced to the reign of Tipu Sultan** who invited artisans from Persia to train the local artisans in the making of wooden toys.
- **Bavas Miyan** is the father of Channapatna Toy.



GEOGRAPHY

Crete Island

- Crete is the **largest island in Greece** and the fifth largest island in the **Mediterranean Sea**.
- It is located in the southern part of the Aegean Sea **separating the Aegean from the Libyan Sea**.
- Crete was the centre of Europe's first advanced civilization, the Minoans, from 2700 to 1420 BC.



Chushul

- Chushul is a village in Ladakh. It is located in the Durbuk tehsil, in the area known as "Chushul Valley", **south of the Pangong Lake and west of the Spanggur Lake.**
- The Line of Actual Control with China runs about 5 miles east of Chushul, across the Chushul Valley.
- Chushul is **one of the five officially agreed Border Personnel Meeting points** between the Indian Army and the People's Liberation Army of China for regular consultations and interactions between the two armies to improve relations.



Border Meeting Points

- India and China hold Border Personnel Meetings at five points --Daulat Beg Oldie in northern Ladakh, Kibithu in Arunachal Pradesh, Chushul in Ladakh, Bum-La near Tawang in Arunachal Pradesh and Nathu-La in Sikkim.

Mundra Port

- Mundra Port is the **largest private port of India** located on the north shores of the Gulf of Kutch near Mundra, Kutch district, Gujarat.
- Mundra Port is India's **first multi-product port-based special economic zone (SEZ).**
- The Republic of Kazakhstan is considering building a terminal at the Mundra Port to provide Indian goods direct access to Central Asia via the Iran-Turkmenistan-Kazakhstan railway line.

Hurricane Nana

Context

- Atlantic hurricane Nana made a landfall on the coast of Belize.

Belize

- Belize, formerly known as British Honduras, is a **Caribbean country** located on the northeastern coast of Central America.
- Belize is bordered on the northwest by Mexico, on the east by the Caribbean Sea, and on the south and west by Guatemala.
- The Maya Civilization flourished in Belize until about 1200 AD.



Storms

- Hurricanes are tropical storms that form over the **North Atlantic Ocean and Northeast Pacific.**
- Cyclones are formed over the **South Pacific and Indian Ocean.**
- Typhoons are formed over the **Northwest Pacific Ocean.**
- Willy willies are **whirlwind or Dust storms that occur in Australia.**

'Swabhiman Anchal' & Gurupriya Bridge

Context

- Odisha's remote 'Swabhiman Anchal' the hotbed of Maoists in the state got access to mobile network connectivity. The area got its first road connectivity two years ago, when Gurupriya Bridge was inaugurated and the region was declared as 'Swabhiman Anchal'.

Gurupriya Bridge

- The Bridge connects villages situated on the other side of the **Balimela Reservoir** with the mainland-Chitakonda Block of Odisha.
 - ✓ The Balimela Reservoir is located in Malkangiri district, Odisha, **on the river Sileru** which is a tributary of the Godavari River.

Typhoon Haishen

- Recently, Typhoon Haishen made landfall over southern Japan.
- The typhoon is categorized as a **Category 4 storm.**

Naming of Typhoons

- Intergovernmental organization called the Typhoon Committee (Cambodia, China, Democratic People's Republic of Korea, Hong Kong, Japan; Lao People's Democratic Republic, Macao, China, Malaysia, the Philippines, Republic of Korea, Singapore, Thailand, Vietnam and the United States of America), which has 14 members including Japan uses Asian names for typhoons that are contributed by the member countries.
- Haishen was a name recommended by China and means "sea god" in Chinese.

Scale Number (Category)	Sustained Winds (MPH)	DAMAGE	Storm Surge
1	74-95	Minimal: Unanchored mobile homes, vegetation and signs.	4-5 Feet
2	96-110	Moderate: All mobile homes, roofs, small crafts, flooding.	6-8 Feet
3	111-130	Extensive: Small buildings, low-lying roads cut off.	9-12 Feet
4	131-155	Extreme: Roofs destroyed, trees down, roads cut off, mobile homes destroyed. Beach homes flooded.	13-18 Feet
5	155 - +	Catastrophic: Most buildings destroyed. Vegetation destroyed. Major roads cut off. Homes flooded.	Greater Than 18 Feet

Kra Canal

Context

- In a big blow to China, Thailand announced that it will scrap a Chinese led-KRA canal project under which Beijing wanted to build a bypass to the Strait of Malacca.

Canal

- The **Thai Canal, also known as Kra Canal**, refers to proposals for a canal that was supposed to connect the Gulf of Thailand with the Andaman Sea across the Kra Isthmus in southern Thailand.
- It was envisaged that such a canal would improve transportation in the region, similar to the Panama Canal and Suez Canal.
- The canal was supposed to provide an alternative to transit through the Straits of Malacca and shorten transit for shipments of oil to Japan and China by 1,200 km.

Map 1: Geographic Location of Malacca Strait



Source: Malacca Strait cooperation. (2012). Retrieved Jan 11, 2015, from <http://www.marsecreview.com/2012/07/malacca-strait-cooperation/>

Malacca Strait

- Straits of Malacca are a narrow stretch of water, 890 km in length, **between the Malay Peninsula (Peninsular Malaysia) and the Indonesian island of Sumatra.**
- As the main **shipping channel between the Indian Ocean and the Pacific Ocean**, it is one of the most important shipping lanes in the world.

Nathu La

Context

- India-China standoff has casted a shadow on Nathu La border trade.

About

- Nathu La is a mountain pass in the Himalayas in East Sikkim.
- It connects **Sikkim with China's Tibet Autonomous Region.**
- The pass, at 4,310 m above mean sea level, forms a part of an **offshoot of the ancient Tea Horse Road.**
- Only citizens of India can visit the pass,** and only after obtaining a permit in Gangtok.
- Nathu La is **one of the three open trading border posts between China and India;** the others are Shipkila in Himachal Pradesh and Lipulekh at the trisection point of Uttarakhand-India, Nepal and China.
- Sealed by India after the 1962 Sino-Indian War, Nathu La was re-opened in 2006 following numerous bilateral trade agreements.
- It is also one of the five officially agreed Border Personnel Meeting points between the Indian Army and the People's Liberation Army of China for regular consultations

Border Meeting Points

- India and China hold Border Personnel Meetings at five points --Daulat Beg Oldie in northern Ladakh, Kibithu in Arunachal Pradesh, Chusul in Ladakh, Bum-La near Tawang in Arunachal Pradesh and Nathu-La in Sikkim.



Nioghalfjærdsfjorden Glacier

- A big chunk of ice has broken away from the **Nioghalfjærdsfjorden Glacier**.

The Glacier

- Nioghalfjærdsfjorden is a large glacier located in King Frederick VIII Land, northeastern **Greenland**.
- It is Arctic's largest remaining ice shelf - 79N or **Nioghalfjærdsfjorden Glacier**.
- In July 2020, the northern offshoot, the **Spalte Glacier** broke away from Nioghalfjærdsfjorden and completely disintegrated.

Shinkun La Tunnel

Context

- Work on Shinkun La Tunnel has been sped up.

Tunnel

- Shinkun La is a 13.5 Km long tunnel under the Shingo La pass will enable all-weather road connectivity **between Manali and Nimu via Shingo La and Padum**.
- So, the tunnel will provide all-weather road connectivity between Himachal Pradesh and Jammu and Kashmir in Zaskar valley.

Shingo La

- Shingo-La (also known as Shinku La) is a mountain pass on the border between Ladakh and Himachal Pradesh.
- The pass is on a long-distance footpath linking Zaskar and Lahaul.
- This pass is an entry point to **Lugnak Valley in Zaskar**.

Etosha Pan

Context

- NASA recently captured images depicting the wet and dry cycles of Etosha Pan.

About

- The Etosha pan is a large **endorheic salt pan**, forming part of the **Kalahari Basin** in the north of **Namibia**.
- The pan was **formed due to tectonic plate activity** about ten million years.
- Kunene River fed the lake at that time.
- Now the Ekuma River, the Oshigambo River and the Omurambo Ovambo River are the sole seasonal source of water for the lake. The pan is mostly dry but after a heavy rain it will acquire a thin layer of water, which is heavily salted by the mineral deposits on the surface.
- The Etosha pan is completely within the Etosha pan national park and **is designated as a Ramsar wetland of international importance** and a **World Wildlife Fund ecoregion** (Etosha Pan halophytics).
 - ✓ An endorheic lake is a lake that doesn't drain towards the ocean.
 - ✓ Endorheic lakes are typically found far inland and are most common in desert regions. The main loss of water from these types of lakes occurs through evaporation and seepage.

Medicane

Context

- Recently, a **medicane named Ianos** made landfall along the coast of Greece and caused heavy rainfall.

About

- Extra tropical **storms in the Mediterranean Sea**, are known as 'Medicanes' or 'Mediterranean Hurricanes'.

Extra tropical cyclones

- An extratropical cyclone (also called a **mid-latitude cyclone**) is a type of cyclone.
- It is a large low-pressure weather area with clouds, rain and heavy wind.
- They occur in areas that are between latitudes **30° – 60° from the equator**.
- They are not the same as tropical cyclones or low-pressure weather areas from polar zones.



- They are actually many **masses of cold and warm fronts** producing rain, heavy wind, and sometimes tornadoes and even hail.
- An extratropical **cyclone turns anticlockwise in the Northern Hemisphere.**
- The usual size in **diameter is about 1000 km.**

English Channel

Context

- Recently, Google celebrated the 80th birth anniversary of Arati Saha, the first Asian woman to swim across the English Channel.

About

- English Channel is an **arm of the Atlantic Ocean** that separates Southern England from northern France.
- It **links to North Sea by the Strait of Dover** at its northeastern end. It is the busiest shipping area in the world.
- The Strait of Dover, at the Channel's eastern end, is its narrowest point. Its widest point lies between Lyme Bay and the Gulf of Saint Malo, near its midpoint.
- The Channel is **of geologically recent origin**, having been dry land for most of the Pleistocene period.



Nagorno-Karabakh

Context

- Recently, clashes erupted between Armenia and Azerbaijan over the Nagorno-Karabakh region.

The region

- Nagorno-Karabakh, also known as Artsakh, is a **landlocked region in the South Caucasus**, within the mountainous range of Karabakh.
- Nagorno-Karabakh is a disputed territory, internationally recognized as part of Azerbaijan, but mostly governed by the Republic of Artsakh a de facto independent state with an Armenian ethnic majority.



South Caucasus

- South Caucasus also known as the Transcaucasia is a geographical region in the vicinity of the southern Caucasus Mountains on the **border of Eastern Europe and Western Asia.**
- Transcaucasia roughly **corresponds to modern Georgia, Armenia, and Azerbaijan.**

Durgam Cheruvu

Context

- Recently, the cable stayed bridge on **Durgam Cheruvu** was inaugurated.

About

- Durgam Cheruvu also known as Raidurgam Cheruvu is a **freshwater lake in Telangana.**
- The lake is located near the city of Hyderabad. The lake is also **known as Secret Lake** because it is hidden between the localities of **Jubilee Hills and Madhapur.**
- Under the rule of the **Qutub Shahi dynasty (ca. 1518–1687),** this lake served as the drinking water source for the residents of Golkonda Fort.

Baltic States

- The Baltics, is a geopolitical term, typically used to group the three sovereign states in Northern Europe on the eastern coast of the Baltic Sea: **Estonia, Latvia, and Lithuania.**
- All three countries are members of NATO, the eurozone, the OECD, and the European Union.
- All three are classified as **high-income economies by the World Bank** and maintain a **very high Human Development Index.**



- The Baltic States are bounded on the west and north by the Baltic Sea, which gives the region its name, on the east by Russia, on the southeast by Belarus, and on the southwest by Poland and an exclave of Russia.

Kosi Rail Mahasetu

Context

- Recently, the Kosi Rail Mega bridge of Indian Railways was inaugurated.

About

- The 1.9 km bridge **connects the Mitihila and Kosi region**. This bridge is of strategic importance along the Indo-Nepal border.
- It would also make it easy for long distance travel to Kolkata, Delhi and Mumbai for the people of the region.

Pripyat River

Context

- The World Wide Fund (WWF) for Nature has warned that the dredging of the Pripyat River that flows near the site of nuclear accident at Chernobyl, could wreak havoc on an estimated 28 million people in Ukraine.

About

- Pripyat River flows east **through Ukraine, Belarus, and Ukraine again, draining into the Dnieper**.
- Dnieper River is Ukraine's most important river, on which its capital city of Kiev is located.
- The Pripyat River is being dredged as part of the restoration of a bilateral waterway between Ukraine and Belarus and is being seen as the first step of the much larger E40 project.
- The Pripyat will become a permanent source of radioactive contaminants-the WWF statement warned.



E40 waterway

- The E40 Inland Waterway is a transnational project. It aims at establishing a 2,000 km Black Sea -to-Baltic-Sea inland waterway through Poland, Belarus and Ukraine connecting the seaports of Gdansk and Kherson.

Mekedatu Project

- 'Mekedatu' is a place at the confluence of **Cauvery** and Arkavathi rivers, 110 kms from Bengaluru.
- And a **multi-purposebalancing reservoir project** over river Kaveriwas built termed as **Mekedatu Project**.
- The aim was to solve the drinking water problems of Bengaluru and Ramnagar district.
- The project intends to store excess water that would otherwise flow into the Bay of Bengal.
- Between 250 MW to 400 MW of electricity is expected to be produced.

Kaveri

- Kaveri rises at **Talakaveri in the Brahmagiri range** in the Western Ghats in Karnataka. It flows through Karnataka and Tamil Nadu.
- River Basin: In Tamil Nadu, Karnataka, Kerala and Puducherry.
- Tributaries: **Harangi, Hemavati, Kabini, Bhavani, Lakshmana Tirtha, Noyyal and Arkavati**.
- In Chamarajanagar district it forms the island of **Shivanasamudra**, on either side of which are the Shivanasamudra Falls.

Typhoon Mayasak

- Typhoon Maysak, was a deadly, damaging and **powerful tropical cyclone** that struck the **Ryukyu Islands and the Korean Peninsula** in September 2020.
- Maysak formed from a tropical disturbance.

Typhoon

- A typhoon is a mature tropical cyclone that develops **between 180° and 100°E in the Northern Hemisphere**.
- This region is referred to as the **Northwestern Pacific Basin**, and is the most active tropical cyclone basin on Earth, accounting for almost one-third of the world's annual tropical cyclones.



Ryukyu

- Ryukyu are a **chain of Japanese islands** that stretch southwest from Kyushu to Taiwan. The largest is Okinawa Island.

Mt Everest

Context

- China and Nepal together have decided to re-measure the elevation of the world's highest mountain- Mt Everest.
- Mt Everest's current official height of 8,848m has been widely accepted since 1956, when the figure was measured by the Survey of India.

About Everest

- Located in the **Mahalangur Himal sub-range of the Himalayas**. The China–Nepal border runs across its summit point.
 - ✓ Mahālangūr Himāl is a section of the Himalayas in northeast Nepal and south-central Tibet of China extending east from the pass Nangpa La between Rolwaling Himal and Cho Oyu, to the Arun River.
 - ✓ It includes Mount Everest, Lhotse, Makalu, and Cho Oyu — four of Earth's six highest peaks.
- In 1865, Everest was given its official English name by **the Royal Geographical Society**, as recommended by Andrew Waugh, the British Surveyor General of India, who chose the name of his predecessor Sir George Everest.
- Everest, like the rest of the Himalayas, rose from the floor of the ancient Tethys Sea.
- The range was created when the **Eurasian continental plate collided with Indian sub-continental plate** about 60 million years ago.
- Mount Everest **grows about a half-inch taller each year** as the Himalaya Mountains are pushed up by the creeping collision between the Indian and Asian land masses. The resulting Earth strains make the entire region vulnerable to large earthquakes.

Survey of India

- Survey of India is the **National Survey and Mapping Organization** of the country under the Department of Science & Technology.
- It is the oldest scientific department of the Govt. of India. It was set up in 1767 and is headquartered at Dehradun.

POLITY

Global Innovation Index

- India has climbed 4 spots and has been** ranked 48th by the World Intellectual Property Organization in the Global Innovation Index 2020 rankings.
- India was at the 52nd position in 2019 and was ranked 81st** in the year 2015.
- The **WIPO had also accepted India as one of the leading innovation achievers of 2019 in the central and southern Asian region**, as it has shown a consistent improvement in its innovation ranking for the last 5 years.
- The **consistent improvement in the global innovation index rankings is owing to the immense knowledge capital, the vibrant startup ecosystem, and the amazing work done by the public & private research organizations**.
- The **Global Innovation Index (GII) is a ranking of countries as per their success and capacity in innovation**.
- It is **published yearly by the World Intellectual Property Organization (WIPO)**.
- GII is developed jointly by Cornell University, INSEAD and World Intellectual Property Organization.
- GII 2020 ranks 131 economies based on 80 indicators, compiled under 7 pillars.

Swamih Investment Fund

Context

- **Special Window for Completion of Affordable and Mid-Income Housing (Swamih Investment Fund) created.**

Features

- The **fund has been created for funding stalled projects that are net-worth positive, including those** projects that have been declared as Non-Performing Assets (NPAs) or are pending proceedings before the National Company Law Tribunal under the Insolvency and Bankruptcy Code.
- The **objective is to give relief to homebuyers of stalled projects** and provide last-mile funding to stressed affordable and middle-income housing projects.
- It is **an alternative investment fund (AIF) to provide priority debt** financing for the completion of stalled housing projects.
- It **covers stalled, brownfield, RERA registered residential developments** that are in the affordable housing/mid-income category, are net-worth positive and require last-mile funding to complete construction.

E-Gram Swaraj Portal

Context

- A unified **tool e-Gram SWARAJ portal has been developed by the Ministry for effective monitoring and evaluation of works taken up in the Gram Panchayats.**

Objective

- **e-Gram SWARAJ unifies the planning, accounting and monitoring functions of Gram Panchayats.**
- It's combination **with the Area Profiler application, Local Government Directory (LGD) and the Public Financial Management System (PFMS)** renders easier reporting and tracking of Gram Panchayat's activities.
- It **provides a single-window for capturing Panchayat information with the complete** Profile of the Panchayat.
- For the **year 2020-21, around 2.43 lakh Gram Panchayats have finalized their GPDP on e-Gram SWARAJ.**
- Further, around 1.24 lakh Gram Panchayats have transacted online using the e-Gram SWARAJ Online Payment Module.

Village Poverty Reduction Plan

Context

- Self Help Groups across the country is geared up to prepare the Village Poverty Reduction Plan for integration with the Gram Panchayat Development Plans.

Background

- In 2015, **the Fourteenth Finance Commission grants were devolved to Gram Panchayats that provided them with** an enormous opportunity to plan for their development themselves.
- Since then, **local bodies across the country are expected to prepare context-specific, need-based Gram Panchayat Development Plans (GPDP).**

Village Poverty Reduction Plans (VPRP)

- VPRP is a **comprehensive demand plan prepared by the Self Help Group (SHG) network and their federations for** projecting their demands and local area development which needs to be integrated with the Gram Panchayat Development Plan (GPDP).
- It will **bring together both the citizens and their elected representatives** in the decentralized planning processes.
- The **VPRP is presented in the Gram Sabha meetings.**
- It **facilitates an interface between the SHG federation and Panchayati Raj institutions for the development of demand plans.**
- **It strengthens** the community-based organisations and their leadership for active participation in poverty reduction activities.
- Demands under VPRP are categorized into five major components:
 1. **Social inclusion** - plan for inclusion of vulnerable people/household into SHGs under NRLM
 2. **Entitlement** - demand for various schemes such as MGNREGS, SBM, NSAP, PMAY, Ujjwala, Ration card etc.
 3. **Livelihoods** - specific demand for enhancing livelihood through developing agriculture, animal husbandry, production and service enterprises and skilled training for placement etc.
 4. **Public Goods and Services** - demand for necessary basic infrastructure, for renovation of the existing infrastructure and for better service delivery

5. **Resource Development** - demand for protection and development of natural resources like land, water, forest and other locally available resources
6. **Social Development** - plans prepared for addressing specific social development issues of a village under the low cost no cost component of GPDP

SOCIAL JUSTICE

"KIRAN" – the mental health rehabilitation helpline

Context

- The **Union Social Justice and Empowerment Ministry** have launched **"KIRAN"** – the mental health rehabilitation helpline.

About the Helpline

- It is a **24/7 toll-free helpline to provide support** to people facing anxiety, stress, depression, suicidal thoughts and other mental health concerns.
- The **helpline will be available in 13 languages**.
- It would function as the first step for callers to get advice, counselling and referral to psychologists and psychiatrists.

Mental illness in India

- According to a NIMHANS survey in 2015-2016, while 10.6% of adults and 7.3% of adolescents faced mental illness, there was a shortage of qualified mental health professionals.

NSO Report on Digital Divide

Context

- Release of the **report on the digital divide by NSO**.
- The survey on household social consumption related to education was part of the NSO's 75th round, conducted from July 2017 to June 2018.

Finding of the report

- The **report shows just how stark the digital divide is, across States, cities and villages, and income groups**.
- Across India, **only one in 10 households have a computer** — whether a desktop, laptop or tablet.
- However, **almost a quarter of all homes have Internet facilities, accessed via a fixed or mobile network using any device**, including smartphones.
- Most of these Internet-enabled homes are located in cities, where 42% have Internet access.
- In rural **India, however, only 15% are connected** to the Internet.
- The national capital has the highest Internet access, with 55% of homes having such facilities.
- **Himachal Pradesh and Kerala are the only other states where more than half** of all households have Internet.
- **Odisha has the least Internet-enabled** homes.
- There **are ten other States with less than 20% Internet penetration**, including States with software hubs such as Karnataka and Tamil Nadu.
- **Kerala shows the least inequality: more than 39% of the** poorest rural homes have Internet, in comparison to 67% of the richest urban homes.
- **Assam shows the starkest inequality, with almost 80% of** the richest urban homes having Internet access denied to 94% of those in the poorest rural homes in the State.
- The biggest divide is by economic status. In Odisha, almost 63% of homes in the top urban quintile have Internet facilities. In the poorest quintile of rural Odisha, however, that figure drops to an abysmal 2.4%.

Comment on Literacy

- The **Survey shows that 20% of Indians above the age of 5 years had basic digital literacy, doubling to just 40% in the** critical age group of 15 to 29 years.
- More **than one in five Indians above 7 years still cannot** read and write in any language.
- Andhra Pradesh has the country's lowest literacy rate, at just 66.4%, significantly lower than less developed States such as Chhattisgarh (77.3%), Jharkhand (74.3%), Uttar Pradesh (73%), and Bihar (70.9%).
- **Kerala remains at the top of the pile with 96.2% literacy, followed by three northern States: Delhi (88.7%), Uttarakhand (87.6%) and Himachal Pradesh (86.6%).**

About National Statistical Organisation (NSO)

- National Statistical Office (NSO) was formed through the merger of the NSSO and CSO under the Ministry of Statistics and Programme Implementation (MoSPI).

The objective of NSO

- Acts as the nodal agency for planned development of the statistical system in the country
- Lays down and maintains norms and standards in the field of statistics
- Coordinates the statistical work in respect of the Ministries/Departments of the Government of India and State Statistical Bureaus (SSBs)
- Compiles and releases the Index of Industrial Production (IIP) every month** in the form of 'quick estimates';
- Conducts the Annual Survey of Industries (ASI)**
- Organizes and conducts periodic all-India Economic Censuses** and follow-up enterprise surveys
- Conducts large scale all-India sample surveys for creating the database needed for studying the impact of specific problems for the benefit of different population groups in diverse socio-economic areas, such as employment, consumer expenditure, housing conditions and environment, literacy levels, health, nutrition, family welfare, etc.**

Health in India report by NSO

Context

- 'Health in India' report has been published by the National Statistical Organisation (NSO).
- The report is based on the 75th round of the National Sample Survey (July 2017-June 2018) on household social consumption related to health.

Findings of the Report

- Across the country, **only 59.2% of children under five years are fully immunised.**
- Although almost all **children in India are vaccinated against tuberculosis and receive their birth dose of polio vaccine.**
- Two out of five children do not complete their immunisation** programme
- Most of these children remain unprotected against measles, and partially protected against a range of other diseases.
- In the **national capital, less than half of all children have been** given all eight required vaccines.
- About 97% of children across the country received at least one vaccination — mostly BCG and/or the first dose of OPV at birth.** This remains steady across income groups and geographies.
- However, **only 67% of children are protected against** measles.
- The vast majority of these vaccinations — 95% in rural India and 86% in cities — were carried out in government health facilities and primary health centres.
- Among States, Manipur (75%), Andhra Pradesh (73.6%) and Mizoram (73.4%) recorded the highest rates of full immunisation.
- At the other end of the spectrum lies Nagaland, where only 12% of children received all vaccinations, followed by Puducherry (34%) and Tripura (39.6%).
- The pandemic has already impacted the childhood vaccination programme.

About Full Immunisation

- Full **immunization means that a child receives a cocktail of eight vaccine doses in the first year of life: BCG**, the measles vaccine; the oral polio vaccine (OPV), the DPT/pentavalent vaccine.

About Mission Indradhanush

- The **Mission Indradhanush aims to cover all those children by 2020 who are either unvaccinated** or are partially vaccinated against vaccine-preventable diseases.
- India's Universal Immunisation Programme (UIP) provide free vaccines against 12 life-threatening diseases, to 26 million children annually.
- Focused and systematic immunization drive will be through a "catch-up" campaign mode where the aim is to cover all the children who have been left out or missed out for immunization.
- Government has further launched the Intensified Mission Indradhanush 2.0**

Global Multidimensional Poverty Index and India

Context

- NITI Aayog as the nodal agency has been assigned the responsibility of leveraging the monitoring mechanism of the **Global Multidimensional Poverty Index (MPI)** to drive reforms.
- The objective of the “**Global Indices to Drive Reforms and Growth (GIRG)**” exercise is to fulfil the need to **measure and monitor India’s performance on various important social and economic parameters and enable the utilisation of these Indices as tools for self-improvement**, bring about reforms in policies while improving last-mile implementation of government schemes.

Global MPI

- It is an international measure of multidimensional poverty covering 107 developing countries.
- It was first developed in 2010 by Oxford Poverty and Human Development Initiative (OPHI) and the United Nations Development Programme (UNDP) for UNDP’s Human Development Reports.
- It is released at the High-Level Political Forum (HLPF) on Sustainable Development of the United Nations in July, every year.
- It is computed by scoring each surveyed household on 10 parameters based on -nutrition, child mortality, years of schooling, school attendance, cooking fuel, sanitation, drinking water, electricity, housing and household assets.
- It utilises the National Family Health Survey (NFHS) which is conducted under the aegis of the Ministry of Health and Family Welfare (MoHFW) and International Institute for Population Sciences (IIPS).
- According to Global MPI 2020, India is 62nd among 107 countries with an MPI score of 0.123 and 27.91% headcount ratio, based on the NFHS 4 (2015/16) data.
- Neighbouring countries like Sri Lanka (25th), Bhutan (68th), Nepal (65th), Bangladesh (58th), China (30th), Myanmar (69th) and Pakistan (73rd) are also ranked in this index.



INTERNATIONAL RELATIONS

Basic Exchange and Cooperation Agreement

Context

- The U.S. is keen that India sign the last foundational agreement, Basic Exchange and Cooperation Agreement for Geo-Spatial cooperation (BECA), at the next India-U.S. 2+2 ministerial dialogue.
- A maritime information agreement is also under active deliberation between India and the U.S.
- Beginning 2016, India has signed three foundational agreements: the Logistics Exchange Memorandum of Agreement (LEMOA), the Communications Compatibility and Security Agreement (COMCASA) while the General Security of Military Information Agreement (GSOMIA) was signed a long time ago.
- An extension to the GSOMIA, the Industrial Security Annex (ISA), was signed at the last 2+2 dialogue.

India-U.S. Foundational Military Agreements

Agreement	Year	Description
General Security of Military Information Agreement (GSOMIA)	2002	Allows the sharing of classified information by the U.S. government and firms with the Indian government and state-owned enterprises.
Logistics Exchange Memorandum of Understanding (LEMOA)*	2016	Gives the two countries' militaries access to each other's facilities for refueling and replenishing.
Communications, Compatibility and Security Agreement (COMCASA)**	2018	Allows the sale and exchange of encrypted communications data and equipment.
Basic Exchange and Cooperation Agreement (BECA)	Pending	Enables the two countries to share advanced satellite data for long-range navigation and missile targeting.

* LEMOA is an India-specific modified version of a Logistics Support Agreement (LSA), also commonly known as an Acquisition and Cross-Servicing Agreement (ACSA).


** COMCASA is an India-specific modified version of a Communications Interoperability and Security Memorandum of Agreement (CISMOA).

Industrial Security Annex (ISA)

- The Industrial Security Annex (ISA), signed between India and the U.S. at the second 2+2 dialogue in Washington.
- ISA will enable smooth transfer of classified technology and information between private entities of the U.S. and India.
- ISA would “facilitate collaboration between our defense industries by supporting the secure transfer of key information and technology.”
- The ISA is a part of the General Security of Military Information Agreement (GSOMIA), which India signed with the U.S. long back.

COMCASA

What
Legal framework to allow US to transfer high-end communication security equipment to India.



Why

- Enable Indian and US forces to operate more closely, share information on secure networks
- Improve performance of US-sourced platforms with compatible, secure communication systems
- Establishes platform to share real-time operational information with US & its allies

• The Controversy •

UPA refused because it feared getting dragged into a US military alliance

The coding and keying systems will be same, allowing US access to Indian tactical information

The agreement may specify US personnel to be given access to US-sourced communication equipment for periodic inspection

Integration with existing Russian weapon system may be a challenge

FOUNDATIONAL AGREEMENTS

<p>Logistics Exchange Memorandum of Agreement (LEMOA)</p> <ul style="list-style-type: none"> Provide logistic support, refuelling & berthing facilities for each other's warships & aircraft on barter/equal-value exchange basis Will not involve stationing of US troops on Indian soil. Nor will India extend support if US goes to war with "a friendly country" Good for US forces re-balancing to Asia Pacific. Indian forces rarely operate far away from their shores but access to Djibouti & Diego Garcia could be useful 	<p>Communication Interoperability & Security Memorandum of Agreement (CISMOA)</p> <ul style="list-style-type: none"> Technology enabler to help transfer high-tech avionics, encrypted communication & electronic systems to India US says CISMOA will boost 'interoperability' as well as ensure secrecy of its C4ISR (command, control, communications, computer, intelligence, surveillance and reconnaissance) systems But fears that US will be able to track & snoop on Indian warships/aircraft equipped with such systems
<p>Basic Exchange & Cooperation Agreement for Geo-Spatial Cooperation (BECA)</p>	<ul style="list-style-type: none"> US says BECA will help India with advanced satellite & topographical data for long-range navigation & missile-targeting But India, which has its own satellite imaging capabilities, unwilling for American digital sensors to be positioned on its soil

US-India Strategic Partnership Forum (USISPF)

Context

- 3rd annual leadership US-India Strategic Partnership Forum (USISPF) summit held.

Summit Highlights

- Attended by top corporate leaders, government officials and leaders.
- Theme of the Summit:** "US-India Navigating New Challenges".
- It highlights areas of bilateral cooperation: trade and investment; strategic energy ties; India's position in global supply chains, collaboration in fintech, healthcare, and technology.
- It is a win-win partnership mutually dependent geo-politically, trade, culturally, diplomatically and scientifically.
- Aggressive and assertive China provides further opportunity for both nations to collaborate and ensure international rule of law prevails.

USISPF

- The US-India Strategic Partnership Forum (USISPF) is a **non-profit organization** that works for the partnership between India and the U.S.
- Objectives:** It is committed to creating the most powerful strategic partnership between the U.S. and India.
- Mission:** Promoting bilateral trade is an important part of their work, to create meaningful opportunities that have the power to change the lives of citizens.
- To achieve goals of driving economic growth, job creation, innovation, inclusion, and entrepreneurship.

G-20 Leaders' Summit on Education

Context

- A virtual meeting of G20 Education Ministers was held to discuss and share experiences of member countries in the three identified areas or themes
- Education Continuity in Times of Crises
- Early Childhood Education and
- Internationalization in Education.
- India's commitment for these themes is reflected in the new National Education Policy 2020 that seeks to bring in transformational changes in the education landscape of the country.

Key outcomes

- Education Ministers of G 20 nations have resolved to work together and share best practices in the area of education.
- G20 member countries reaffirm commitment to ensuring education continuity and safety for all.
- The importance of research and data to assess the learning outcomes and quality of distance learning has also been stressed.

Communiqué

- A communiqué was adopted at the end of the meeting for ensuring education continuity in times of crises.
- The communiqué recognizes the value of distance learning, blended teaching and importance of enhancing access to high-quality education, professional development for educators, digital infrastructure and content, cyber security awareness, appropriate teaching methodologies and active learning, while recognizing that these approaches complement face-to-face learning.
- On the importance of Early Childhood Education (ECE) the communiqué emphasized the importance of improving the accessibility and affordability of quality ECE for all children, especially those in vulnerable groups.
- It stresses on the need to raise family and community awareness play vital role of quality ECE.
- It also supports advancing the discussion on internationalization at the K-12 level.

G20 (or Group of Twenty)

- It is an international forum for the governments and central bank governors from 19 countries and the European Union (EU).
- Founded in 1999 with the aim to discuss policy pertaining to the promotion of international financial stability.
- The G20 members are Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Republic of Korea, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom, the United States and the European Union (EU).

ASEAN-India Plan of Action (2021-2025)

Context

- India and the Association of Southeast Asian Nations (ASEAN) adopted the plan of action for 2021-25 that envisages greater cooperation in areas ranging from trade to maritime security and counter-terrorism.
- The plan of action will help the two sides to work towards the ASEAN 2025 vision for an economically integrated and rules-based grouping that narrows the development gap and enhances connectivity.
- Both sides will also cooperate on common challenges and enhance coordination at international forums.

East Asia Summit (EAS)

- It is a regional forum held annually by leaders of, initially, 16 countries in the East Asian, Southeast Asian, South Asian and Oceania regions, based on the ASEAN plus Six mechanism.
- Membership expanded to 18 countries including Russia and the United States at the Sixth EAS in 2011.
- Since its establishment, ASEAN has held the central role and leadership in the forum.
- The first summit was held in Kuala Lumpur, Malaysia on 14 December 2005.

New Plan of Action

- Under the new plan of action, the two sides will further strengthen the **East Asia Summit** "as a premier leaders-led forum for dialogue and cooperation on broad strategic, political and economic issues with the aim of promoting peace, stability and economic prosperity in the region".
- The plan envisages India's active in strengthening of practical defence cooperation to address challenges in maritime security, counter-terrorism, humanitarian assistance and disaster relief, peacekeeping operations, and cyber-security.
- The two sides will also promote maritime security and safety, freedom of navigation and over flight, unimpeded commerce, the non-use of force, and the resolution of disputes by peaceful means, in accordance with 1982 UN Convention on the Law of the Sea (UNCLOS).
- In the field of economic cooperation, the two sides will continue efforts to make the ASEAN-India Free Trade Area (AIFTA) more user-friendly and trade facilitative by initiating a review of the ASEAN-India Trade in Goods Agreement and work towards ratification of the ASEAN-India Investment Agreement to facilitate further economic integration.
- The two sides will work closely to promote physical connectivity by "completing the missing links between South and Southeast Asia, including, but not limited to, expediting the completion of relevant sections of the India-Myanmar-Thailand trilateral highway and supporting steps to build an economic corridor along it and its extension to Cambodia, Lao PDR, and Vietnam".
- The two sides will also encourage private sector participation in developing roads and railways and logistics networks.



ASEAN

- The Association of Southeast Asian Nations (ASEAN) is a regional intergovernmental organization comprising ten countries in Southeast Asia
- It promotes intergovernmental cooperation and facilitates economic, political, security, military, educational, and sociocultural integration among its members and other countries in Asia.



UN's Commission on Status of Women

Context

- India has been elected as the member of the Commission on Status of Women (CSW), a body of the Economic and Social Council (ECOSOC).
- India will be a member of the prestigious body for four years from 2021 to 2025.
- It is endorsement of India's commitment to promote gender equality and women's empowerment in all the endeavors.
- India, Afghanistan and China had contested the elections to the Commission on Status of Women.

Commission on Status of Women

- The CSW is the principal global intergovernmental body exclusively dedicated to the promotion of gender equality and the empowerment of women.
- A functional commission of the ECOSOC, it was established by ECOSOC resolution 11(II) of 21 June 1946.
- It promotes women's rights, highlights the reality of women's lives throughout the world and helps in shaping global standards on gender equality and the empowerment of women.
- 45 member states of the United Nations serve as members of the Commission at any one time.

ECOSOC

- The United Nations Economic and Social Council (ECOSOC) is one of the six principal organs of the United Nations.
- ECOSOC serves as the central forum for discussing international economic and social issues and formulating policy recommendations addressed to member states and the United Nations system.

Indian Technical and Economic Cooperation (ITEC) Programme

Context

- 56th ITEC day was observed online by the High Commission of India in Dhaka.
- In the wake of the COVID 19 pandemic, specialized e-ITEC courses on COVID-19 management strategies were organized for health-care Professionals and Administrators from Bangladesh.
- Over 4000 young Bangladeshi professionals have benefitted from various ITEC programmes since 2007.
- These training programmes provide an opportunity to share best practices, which benefit both the countries.

Indian Technical and Economic Cooperation Programme (ITEC)

- Instituted in 1964, ITEC is a flagship programme of the Government of India to provide development assistance to developing countries across the globe.
- Indian Technical and Economic Cooperation Programme (ITEC) is a bilateral assistance programme run by the Government of India.
- More than 10 thousand training slots are offered every year to more than 160 partner countries for training courses in various areas like Accounts, Audit, Management, SME, Rural Development, Parliamentary Affairs etc.
- It is a demand-driven, response-oriented programme that focuses on addressing the needs of developing countries through innovative technological cooperation between India and the partnering nation.
- ITEC covers 158 countries across Asia, Africa, Latin America, Central and Eastern Europe, and several Pacific and Caribbean nations.

Djibouti Code of Conduct/ Jeddah Amendment (DCOC/JA)

Context

- India has joined the Djibouti Code of Conduct/ Jeddah Amendment, DCOC/JA, as Observer.

Djibouti Code of Conduct/ Jeddah Amendment

- DCOC/JA is a grouping on maritime matters comprising 18 member states adjoining the Red Sea, Gulf of Aden, the East Coast of Africa and Island countries in the Indian Ocean Region.
- India has joined Japan, Norway, the UK and the US as Observers to the DCOC/JA.
- The DCOC, established in January 2009.
- It is aimed at repression of piracy and armed robbery against ships in the Western Indian Ocean Region, the Gulf of Aden and the Red Sea.
- India is looking forward to working together with DCOC/JA member states towards coordinating and contributing to enhanced maritime security in the Indian Ocean Region.

SAARC and CICA Meetings

Context

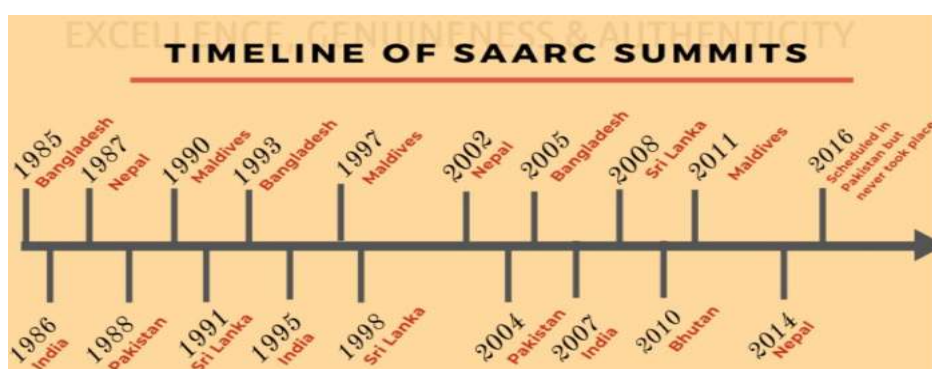
- SAARC foreign ministers informal meeting concluded.
- External affairs minister also participated in the 'special ministerial meeting' of foreign ministers of the Conference on Interaction and Confidence Building Measures in Asia (CICA).

Key highlights

- The SAARC must overcome three key challenges of cross-border terrorism, blocking of connectivity and obstruction in trade.
- SAARC nations must collectively resolve to defeat the scourge of terrorism, including the forces that nurture, support and encourage it.
- India reaffirmed its commitment to 'Neighborhood First' policy and towards building a connected, integrated and prosperous South Asia.

South Asian Association for Regional Cooperation (SAARC)

- It is the regional intergovernmental organization and geopolitical union of states in South Asia.
- Its member states are Afghanistan, Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan and Sri Lanka.
- The SAARC comprises 3% of the world's area, 21% of the world's population and 4.21% of the global economy.
- The SAARC was founded in Dhaka on 8 December 1985.
- Its secretariat is based in Kathmandu, Nepal.
- It maintains permanent diplomatic relations at the United Nations as an observer and has developed links with the European Union.



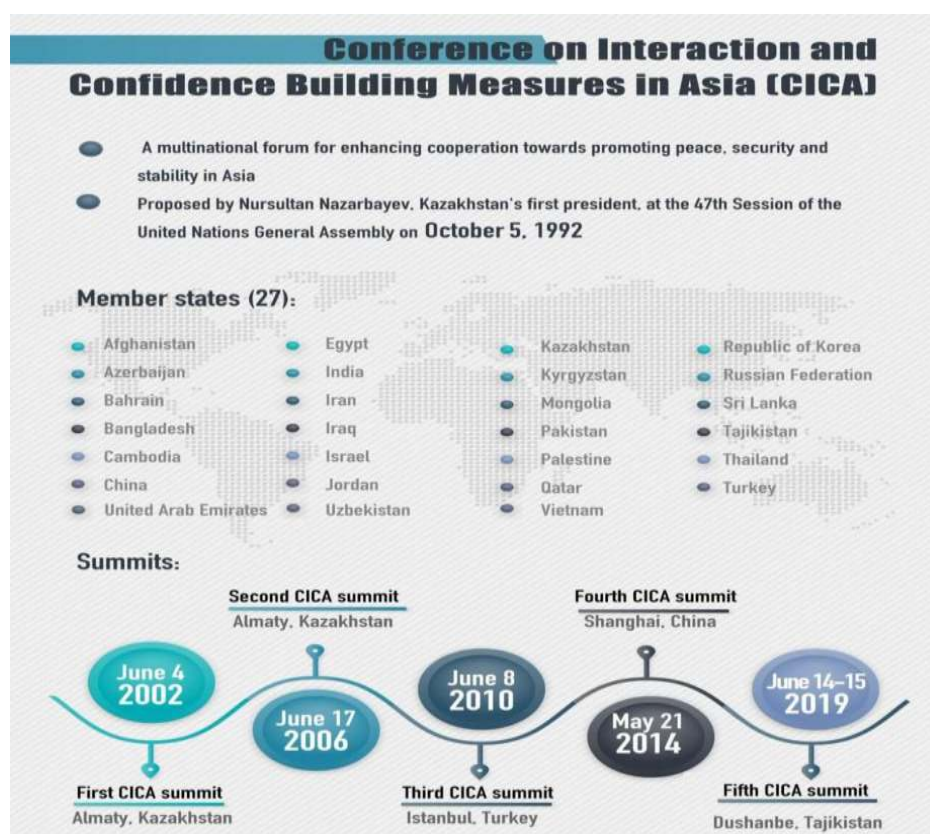
Themes	SAARC summit: Action/Initiative	MAJOR THEMES COVERED AND IMPLEMENTED
<ul style="list-style-type: none"> TRADE IN GOODS/SOUTH ASIAN FREE TRADE AGREEMENT (SAFTA) (implemented but needs improvement like reduction of peak tariffs to ensure freer trade) Decided to finalize the draft treaty text by 2002, expedite removal of tariff and non-tariff barriers to free up trade (Kathmandu summit, 2002) Signed the framework agreement on Safta (Islamabad, 2004) Emphasized need to realize the full potential of Safta by reducing sensitive lists, accelerating trade facilitation measures and removing non-tariff barriers (Thimphu, 2010) TRADE IN SERVICES (agreement came into force in 2012 but discussions on modalities are still on) Recognized need to take regional economic integration further by expanding scope of Safta to include trade in services (Dhaka, 2005) Urged inclusion of trade in services under Safta; called for finalization of such a pact (New Delhi, 2007) Signed Saarc agreement on trade in services and called for its early ratification (Thimphu, 2010) SOUTH ASIAN UNIVERSITY (operational) India offered to establish the university (Dhaka, 2005) Decided to establish the university (Delhi, 2007) 	<ul style="list-style-type: none"> TRANSPORTATION (The Saarc summit, 2014, in Kathmandu is expected to sign the Saarc Motor Vehicles agreement and the Regional Railways agreement) Agreed to study India's proposal for daily air services facility by designated airlines on reciprocal basis (Dhaka, 2005) Urged early implementation of Saarc regional multimodal transport study (Colombo, 2008) Noted progress made in consideration of Saarc Motor Vehicles agreement by member states (Colombo, 2008) Called for collaborative efforts to achieve greater intra-regional connectivity; agreed to expedite talks on agreements on Motor Vehicles and Regional Railways (Thimphu, 2010) Agreed to complete preparatory work on Indian Ocean cargo and passenger ferry service by end of 2011 to launch the service (Addu City, 2011) INVESTMENT (Saarc Investment Promotion and Protection agreement pending since 2007) Sought early finalization of regionally agreed investment framework (Kathmandu, 2002) Directed that the agreement on investment promotion and protection be finalized (New Delhi, 2007) 	<ul style="list-style-type: none"> SAARC ARBITRATION COUNCIL (pending finalization of arbitrators panel) Agreement on operationalizing council (Colombo, 2008) SOUTH ASIAN DEVELOPMENT BANK (to be established) Urged that the prospects of setting up a development bank should be examined (Islamabad, 2004) ENERGY (The Saarc summit, 2014, in Kathmandu is expected to sign a pact on regional power grid) Directed a study on South Asian Energy Cooperation including an Energy Ring (Islamabad, 2004) Stressed the need for urgently developing a hydel power potential, grid connectivity and gas pipelines (Colombo, 2008) Noted proposal from India to prepare a road map for a Saarc market for electricity (Thimphu, 2010) VISION FOR A SOUTH ASIAN COMMUNITY (not much progress) Agreed to the vision of a South Asian community with a smooth flow of goods, technologies, services, people, capital and culture (New Delhi, 2007)

Declining relevance of SAARC

- SAARC has not been very effective since 2016 as its biennial summits have not taken place since the last one in Kathmandu in 2014.
- The 2016 SAARC Summit was to be held in Islamabad. But after the Uri terrorist attack on an Indian Army camp, India expressed its inability to participate in the summit due to "prevailing circumstances".
- The summit was called off after Bangladesh, Bhutan and Afghanistan also declined to participate in the Islamabad meet.

Conference on Interaction and Confidence-Building Measures in Asia (CICA)

- It is an inter-governmental forum for enhancing cooperation towards promoting peace, security and stability in Asia.
- It is a forum based on the recognition that there is close link between peace, security and stability in Asia and in the rest of the world.
- The key idea of the Conference is based on the priority of the indivisibility of security, joint initiative and mutually beneficial interaction of small and large states
- It has 27 countries as its members.



ECONOMY

Selling of G-Secs

Context

- The Reserve Bank of India (RBI) **has announced the simultaneous purchase and sale of Government of India securities (G-secs) for ₹10,000 crores** each under the open market operations (OMO).

About Government of India Securities(G-Sec)

- A **Government Security (G-Sec)** is a tradeable instrument issued by the Central Government or the State Governments. It acknowledges the Government's debt obligation.
- Such securities are short term (usually called treasury bills, with original maturities of less than one year) or long term (usually called Government bonds or dated securities with an original maturity of one year or more).**
- In India, **the Central Government issues both, treasury bills and bonds or dated securities**
- The **State Governments issue only bonds or dated securities, which are called the State Development Loans (SDLs).**
- G-Secs carry practically no risk of default and, hence, are called risk-free gilt-edged instruments.

Doorstep Banking Services and EASE 2.0 Index Results

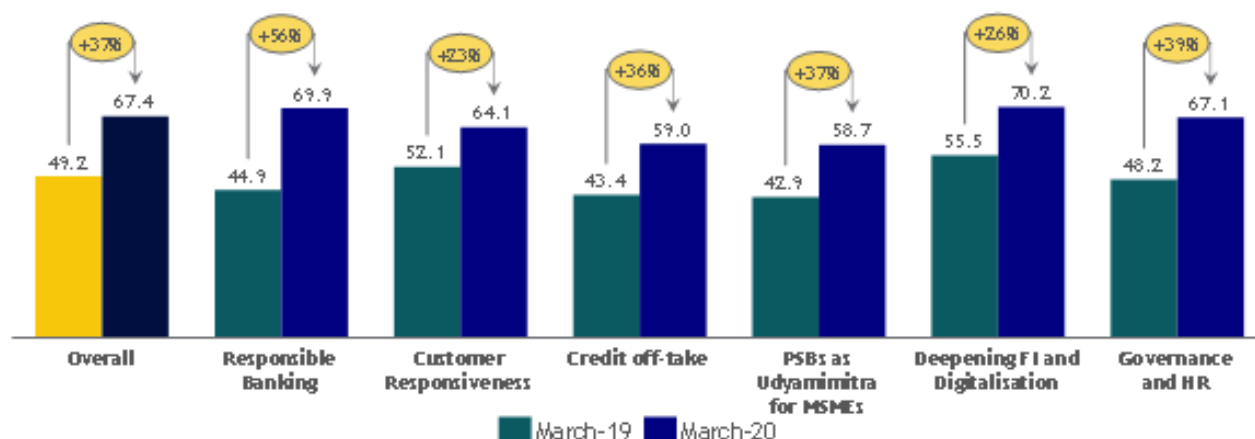
Doorstep Banking Services by PSBs

- As part of the EASE Reforms, Doorstep Banking Services is envisaged to provide the convenience of banking services to the customers at their doorstep through the universal touchpoints of Call Centre, Web Portal or Mobile App.
- The **services shall be rendered by the Doorstep Banking Agents deployed** by the selected Service Providers at 100 centres across the country.
- At **present only non-financial services are available to customers.**
- The services shall benefit all customers, particularly Senior Citizens and Divyangs who would find it at ease to avail these services.

Performance of PSB on Enhanced Access and Service Excellence 2.0 Index

- EASE Agenda is aimed at institutionalizing clean and smart banking.**
- It was launched in January 2018.
- The **overall score of PSBs increased by 37% between March-2019 and March-2020, with the average EASE index score improving from 49.2 to 67.4 out of 100.**
- Significant progress is seen across six themes of the Reforms Agenda, with the highest improvement seen in the themes of 'Responsible Banking', 'Governance and HR', 'PSBs as Udyamimitra for MSMEs', and 'Credit off-take'.**
- Bank of Baroda, State Bank of India, and erstwhile Oriental Bank of Commerce were felicitated for being the top three in the 'Top Performing Banks' category.
- Bank of Maharashtra, Central Bank of India & erstwhile Corporation Bank were awarded in the 'Top Improvers' category basis EASE 2.0 Index.**
- Punjab National Bank, Union Bank of India, and Canara Bank were also recognized for outstanding performance in select themes.
- The Index measures the performance of each PSB on 120+objective metrics across six themes.**
- It provides all PSBs with a comparative evaluation showing where banks stand vis-à-vis benchmarks and peers on the Reforms Agenda.
- The Index follows a fully transparent scoring methodology, which enables banks to identify precisely their strengths as well as areas for improvement.
- The goal is to continue driving change by spurring healthy competition among PSBs and by encouraging them to learn from each other.

Strong progress across themes



Note: Average scores out of 100. Mar-19 baseline scores revised to ensure comparability

Rural Self Employment Training Institutes

Context

- E-Foundation stone laid for National Training Academy for Rural Self Employment Training Institutes in Bengaluru.

Rural Self Employment Training Institutes (RSETIs)

- They are an initiative of the Ministry of Rural Development.
- These institutes engage in imparting training and skill up-gradation of rural youth geared towards entrepreneurship development.
- RSETIs are managed by banks with active cooperation from the Government of India and State Governments.
- Under these, rural BPL youth will be identified and trained for self-employment.
- The training offered will be demand-driven.
- The area in which training will be provided to the trainee will be decided after assessing the candidate's aptitude.
- Hand-holding support will be provided for assured credit linkage with banks.**
- Escort services will be provided for at least two years to ensure the sustainability of micro-enterprise trainees.
- The trainees will be provided with intensive short-term residential self-employment training programmes with free food and accommodation.

SAROD-Ports

Context

- Union Ministry for Shipping launched 'SAROD-Ports' (Society for Affordable Redressal of Disputes - Ports).

Details

- SAROD-Ports is established under the Societies Registration Act, 1860 with the following objectives:**
 - Affordable and timely resolution of disputes in a fair manner
 - Enrichment of Dispute Resolution Mechanism with the panel of technical experts as arbitrators.
- SAROD-Ports consists of members from the Indian Ports Association (IPA) and Indian Private Ports and Terminals Association (IPTTA).
- SAROD-Ports will advise and assist in settlement of disputes through arbitrations in the maritime sector, including ports and shipping sector in Major Port Trusts, Non-major Ports, including private ports, jetties, terminals and harbours.
- It will also cover disputes between granting authority and Licensee/Concessionaire /Contractor and also disputes between Licensee/Concessionaire and their contractors arising out of and during the execution of various contracts.**
- 'SAROD-Ports' is similar to provision available in Highway Sector in the form of SAROD-Roads constituted by NHAI.
- The Union Cabinet had approved amendments in the Model Concession Agreement (MCA) in 2018.

- The amendments in the MCA envisaged constitution SAROD-PORTS as a dispute resolution mechanism for PPP Projects in the Major Ports.

iRAD App

- The Ministry of Road Transport & Highways is in the process of implementing 'Integrated Road Accident Database Project (iRAD)' which will be applicable across the country.
- In **the first instance, it has been decided to implement the proposal in six States, viz. Maharashtra, Karnataka, Madhya Pradesh, Rajasthan, Uttar Pradesh and Tamil Nadu.**
- The development and implementation of iRAD have been entrusted to IIT Madras and National Informatics Centre Services Inc.
- The **App when developed and functional, will enable the stakeholders such as the Police, Transport, Health, etc to use their mobile phones to collect** accident data on the spot.
- This project is proposed on IT-based system for capturing the spot accident data using mobile app configured for this purpose.
- This data can then be utilized for various purposes like finding the causes of the accidents and remedial measures to improve the road infrastructure, to record the accidents data for the use of police, health services and other concerned departments.

Centralized Farm Machinery Performance Testing Portal

Context

- Union Agriculture Ministry launched the Centralized Farm Machinery Performance Testing Portal in the public domain.
- The **portal has been developed by the Department of Agriculture, Cooperation and Farmers' Welfare.**
- It is seen as a step to improve the services of farm machinery testing institutions and bringing out transparency in the entire process of testing and evaluation of machines.
- The portal will facilitate manufacturers in applying, communicating and monitoring the progress of testing of their machines seamlessly as it is easily accessible from any location and any device connected to the Internet.
- **It will improve the efficiency of the testing institutes thereby reducing testing time for various agricultural machines and equipment.**

This portal offers the following benefits to the users

- This would facilitate applying for testing of machinery online.
- Ensure Transparency in the entire processes of testing.
- Faster Feedback
- Help in Reducing testing Time
- Reduced Business Expenses of Agricultural Manufacturers
- Testing Efficiency Improvement
- Thoroughness in Testing
- Flexible Access – Officers concerned at Ministry and manufacturers can monitor testing activities from anywhere with internet access.

SCIENCE & TECHNOLOGY

Haiyang-2C

Context

- China on Monday sent its third **ocean dynamic environment monitoring satellite** into orbit from the Jiuquan Satellite Launch Center.

About

- The Haiyang-2C (HY-2C) satellite can provide all-weather and round-the-clock observation of wave height, sea surface height, wind, and temperature.
- Onboard equipment enables it to provide information on the identification of vessels.
- It also enables to receive, store and transmit buoy measurement data in China's offshore and other marine areas.
- HY-2C will also form a network with the previous HY-2B and subsequent HY-2D, scheduled for launch next year.
- Together they will carry out **high-precision maritime environment monitoring.**

Cat Que Virus

- ICMR scientists have found another virus from China, the 'Cat Que Virus,' which has the potential to spread diseases across India.
- CQV **is arbovirus** and it may cause **febrile illnesses, meningitis, and paediatric encephalitis among humans.**
 - ✓ Arboviral disease is a general term used to describe infections caused by a group of viruses spread to people by the bite of infected arthropods (insects) such as mosquitoes and ticks.
- Its **natural host is a mosquito.** Domestic pigs are the primary mammalian host of CQV and anti-CQV antibodies have been reported in swine reared locally in China.
- As per the ICMR study, Indian mosquitoes are susceptible to CQV, which could also become a public health pathogen.

ICMR

- The Indian Council of Medical Research (ICMR), is the apex body in India for the formulation, coordination and promotion of biomedical research.
- It is one of the oldest and largest medical research bodies in the world.
- The ICMR is **funded by the Government of India** through the Department of Health Research, Ministry of Health and Family Welfare.

Scrub Typhus

Context

- An outbreak of scrub typhus, a bacterial disease, has claimed the lives of five people in Nagaland's Noklak district bordering Myanmar.

Other name of Scrub Typhus	Bush typhus,
Causal organism	<i>Orientia tsutsugamushi</i> (Gram-negative Bacteria)
Spread	Through bites of infected chiggers (larval mites).
Symptoms	Fever, headache, body aches, and sometimes rash
Vaccines	Unavailable. Treated with antibiotics

Phosphine Gas In Venus

Context

- Recently, International astronomers have announced the discovery of traces of a molecule known as phosphine on Venus.
- This implies the possibility of existence of life forms in Venus that release this substance through bio-chemical pathways.

Phosphine

- It is a colourless, odourless, flammable, very toxic gas compound. It consists of inorganic nonmetals.
- Phosphine is **used in the semiconductor industry** to introduce phosphorus into silicon crystals .
- It is also used as **a fumigant, a polymerization initiator** and as an intermediate for the preparation of several flame retardants.

Venus

- It is called **Earth's "sister planet"** because of their similar size, mass, proximity to the Sun, and bulk composition.
- It has the **densest atmosphere of the four terrestrial planets,** consisting of more than **96% carbon dioxide** and remaining 3.5% being nitrogen
- Venus is shrouded by an opaque layer of **highly reflective clouds of sulfuric acid,** preventing its surface from being seen from space in visible light.
- Orbital period: 225 days
- One day on Venus lasts 243 Earth days because **Venus spins backwards,** with its sun rising in the west and setting in the east.
- The planet's surface temperature is about **900 degrees Fahrenheit** (465 degrees Celsius)—hot enough to melt lead.
- The '90s Magellan mission mapped the planet's surface and Akatsuki is currently orbiting Venus.

Himalayan Chandra Telescope

- The Himalayan Chandra Telescope (HCT) is located at the Indian Astronomical Observatory (IAO), **Mt. Saraswati, Digpa-ratsa Ri, Hanle, Ladakh,** at an altitude of 4500 m.
- The telescope is used in **monitoring stellar explosions, comets, and exo-planets, and has contributed significantly to these studies.**

- It is remotely operated using a dedicated satellite communication link from the Centre for Research & Education in Science & Technology (CREST), Indian Institute of Astrophysics, Hosakote, about 35 km northeast of Bangalore.
- The Himalayan Faint Object Spectrograph Camera (HFOSC) and the Near-infrared camera are available here for regular observations.

IAO

- The Indian Astronomical Observatory (IAO), located in Hanle near Leh in Ladakh, has one of the world's highest located sites for optical, infrared and gamma-ray telescopes.
- It is operated by the Indian Institute of Astrophysics, Bangalore. It is currently the ninth highest optical telescope in the world, situated at an elevation of 4,500 meters.

IIA

- The Indian Institute of Astrophysics (IIA), with its headquarters in Bengaluru (Karnataka), is an **autonomous Research Institute wholly financed by the department of Science and Technology,** Government of India.
- IIA conducts research primarily in the areas of astronomy, astrophysics and related fields.

CREST

- CREST is an **autonomous organization under the Government of Kerala .**
- The Governing Council headed by the Minister **for the Welfare of Scheduled and Backward Communities,** Kerala as Chairman monitors the activities of the Centre.
- The Centre has been offering programmes to cater to the educational, cultural and socio-economic mobility of the Scheduled Communities of Kerala.

Brucellosis

Context

- Thousands of people in China have tested positive for a disease, called brucellosis. It was leaked from a laboratory.

About

- Brucellosis is **a bacterial infection that spreads from animals to people.**
- The disease, **also known as Malta fever or Mediterranean fever,** can cause symptoms including headaches, muscle pain, fever and fatigue.
- Human-to-human transmission is extremely rare.
- Brucellosis affects many wild and domestic animals, including: Cattle, Goats, Sheep, Pigs and wild hogs, Dogs, Deer, Elk, Bison, Camels etc
- **Spreads through:** Eating raw dairy products, Inhaling contaminated air, Touching blood and body fluids of infected animals.
- Avoiding raw dairy products and taking precautions when working with animals or in a laboratory can help prevent brucellosis.

Mass Spectrometry

Context

- Using mass spectrometer, researchers have been able to detect novel coronavirus with 95% sensitivity and 100% specificity with respect to RT-PCR (reverse transcription polymerase chain reaction).

Mass spectrometry

- Mass spectrometry (MS) is an analytical technique that **measures the mass-to-charge ratio of ions.**

Details

- The new method can **directly detect the virus without amplifying the RNA for detection,** as is the case with RT-PCR. So, we do not need the viral RNA to be intact after sample collection.
- Instead of amplifying the genetic material of the Sars-CoV-2 virus that causes Covid-19, the technique uses mass spectrometry to detect two peptides (building blocks of the viral protein)
- Mass spectrometry can detect the presence and quantity of various organic and inorganic compounds by detecting the ions released by them.
- The method **eliminates the need for a biosafety lab,** which makes it possible for it to be used at airports and railway stations to test passengers before they board a plane or a train.

- This new method of testing that is **faster, cheaper, and almost as accurate** as the Reverse Transcription-Polymerase Chain Reaction (RT-PCR) test.

Asteroid 465824 2010 FR

Context

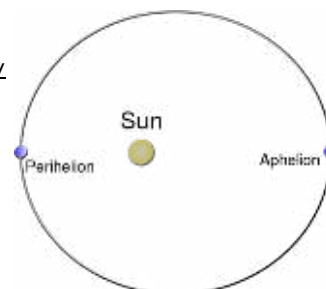
- NASA was tracking Asteroid 465824 2010 FR, which is twice as big as the Pyramid of Giza. It crossed the Earth's orbit recently. It is classified **as a Near-Earth Object (NEO) and a potentially hazardous asteroid (PHA)**.

Asteroids

- They are rocky objects that orbit the Sun, much smaller than planets. Asteroids are minor planets.
- There are over 20,000 known near-Earth asteroids.

NEOs and PHA

- A near-Earth object (NEO) is any small Solar System body whose orbit brings it to proximity with Earth.
- A Solar System body is a NEO if its closest approach to the Sun (perihelion) is less than 1.3 astronomical units (AU). NEOs have low surface gravity,
- If a NEO's orbit crosses the Earth's, and the object is larger than 140 meters across, it is considered a potentially hazardous object (PHO).
- Most known PHOs and NEOs are asteroids, but a small fraction are comets.
- Two scales, the **Torino scale and the Palermo scale, rate risk** based on how probable the orbit calculations of an identified NEO make an Earth impact and on how bad the consequences of such an impact would be.



AU

- One astronomical unit (AU) represents the mean distance between the Earth and our sun.
- An AU is approximately 93 million miles (150 million km). It's approximately 8 light-minutes.

African Trypanosomiasis

Context

- Togo has become the first country in Africa to eliminate human **African Trypanosomiasis** or sleeping sickness.

About

- African Trypanosomiasis, is caused by microscopic parasites of the species *Trypanosomabrucei*.
- It is transmitted by the **tsetse fly (Glossina species)**, which is **found only in sub-Saharan Africa**.
- Two morphologically indistinguishable subspecies of the parasite cause distinct disease patterns in humans:
 - T. b. gambiense** : It causes a slowly progressing African trypanosomiasis in western and central Africa and;
 - T. b. rhodesiense**: It causes a more acute African trypanosomiasis in eastern and southern Africa.
- Sleeping sickness is curable with medication but is fatal if left untreated.

Real Mango

- The Railway Protection Force (RPF) of Indian Railways has disrupted the operation **of illegal software named Real Mango**

About

- The Real Mango Software is illegal software developed for booking Tatkal ticket over the IRCTC website.
- The software was earlier with the name 'Rare Mango'.
- While booking the tickets, the agent logs into the IRCTC website and bypasses the captcha code with the help of the software.
- The software syncs with the bank OTP and automatically fills the information of the passenger to book the tickets.
- It is mainly used by the agent to book the tatkal ticket by illegal means and sell it to the customer at a high price.
- The software logs in to the official website of IRCTC through multiple IRCTC Ids
- This illegal software is sold through a 5-tiered structure (system admin of the software along with his team, maven, super sellers, sellers as well as agents)
- The payment is received by the system admin in bitcoins.

Corticosteroids

Context

- Corticosteroids were widely **used during the outbreaks of severe acute respiratory syndrome (SARS)-CoV1 and Middle East respiratory syndrome (MERS)-CoV,2.**
- Now they are being used in patients with 2019-nCoV in addition to other therapeutics.

About

- Corticosteroids are **synthetic drugs** that are used to treat a wide variety of disorders, including asthma, arthritis, skin conditions and autoimmune diseases.
- They also treat **Addison's disease**, a condition where the adrenal glands aren't able to produce even the minimum amount of corticosteroid that the body needs.
- The drug mimics cortisol - a hormone that's naturally produced by the adrenal glands in healthy people.

WHO

- WHO recommended use of systemic corticosteroids for the treatment of patients with severe and critical COVID-19 only.
- It suggested not to use corticosteroids in the treatment of patients with non-severe COVID-19 as the treatment brought no benefits, and could even prove harmful.

Postage stamp on A-Sat

- Recently, a customized My Stamp on India's First Anti Satellite Missile, A-SAT launch was released by the Department of Posts on the occasion of Engineers Day.
- Anti-satellite weapons (ASAT) are space weapons designed to incapacitate or destroy satellites for strategic military purposes.
- Only the **United States, Russia, China, and India have demonstrated this capability successfully.**
- In, 2019**Mission Shaktianti-satellite (A-SAT) missile test** was conducted by India. India is the **4th country to acquire** such a specialized and modern capability.

ENVIRONMENT

Green Term Ahead Market (GTAM)

Context

- Union Minister launched the Green Term Ahead Market (GTAM) for electricity.

Benefits of this initiative

- It will help in achieving the renewable energy(RE) capacity addition targets of 175 Giga Wattby 2022.
- GTAM platform would lessen the burden on RE-rich states and incentivize them to develop RE capacity beyond their **RPO (Renewable Purchase Obligation)**.
 - Under the RPO, bulk purchasers like discoms, open access consumers and capacitive users are required to buy a certain proportion of clean energy
- It would promote RE merchant capacity addition and additional avenues to RE generators for sale of renewable energy.
- It will benefit buyers of RE through competitive prices and transparent and flexible procurement.
- The will benefit RE sellers by providing access to the market across India.
- Obligated entities can procure renewable power at competitive prices to meet their RPOs.

Key features of GTAM

- GTAM contracts will be segregated into Solar RPO and Non-Solar RPO.
- GTAM contracts will have Green Intraday, Day Ahead Contingency, Daily and Weekly Contracts
- Green Intraday Contract & Day Ahead Contingency Contract – Bidding will take place on a 15-minute time-block wise (MW basis).
- Daily & Weekly Contracts – Bidding will take place on MWh basis. Both buyers and sellers can submit the bid along with the price (Rs/MWh).
- The price discovery will take place continuously i.e. price time priority basis. Open auction can be introduced for daily and weekly contracts.
- Other products will be introduced in the power market for the promotion of RE.

First World Solar Technology Summit

Context

- The first World Solar Technology Summit (WSTS) is being organised by the International Solar Alliance (ISA).

Key highlights of the summit:

- More than 26,000 participants from 149 countries have attended the virtual summit.
- It brought the spotlight on accelerating affordable and sustainable clean energy by showcasing and deliberating on innovative next-generation technologies in solar power.
- Agreements were signed between
 - ISA and International Institute of Refrigeration,
 - ISA and Global Green Growth Institute and
 - ISA and National Thermal Power Corporation
- A tripartite agreement between MNRE, the World Bank and ISA was also inked.
- An international journal on solar technology also launched on the occasion.

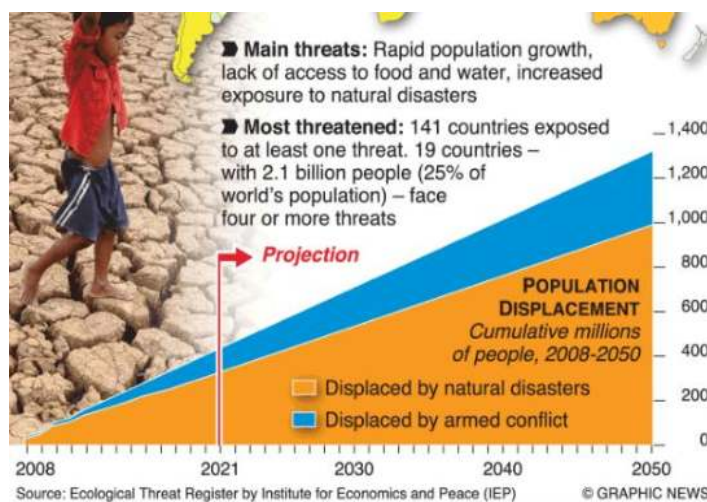
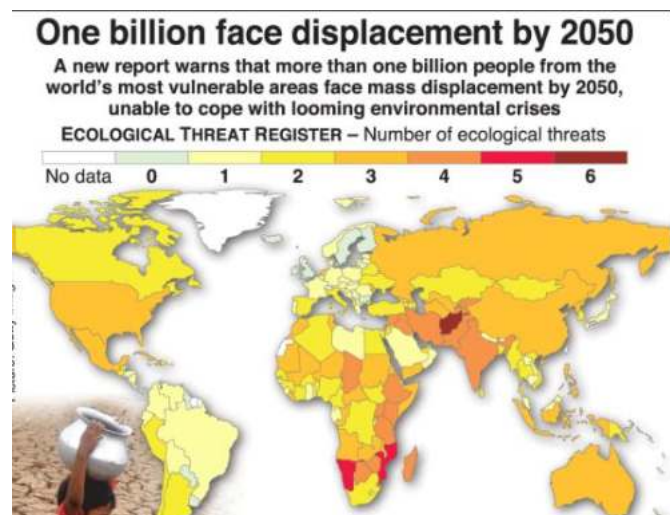
International Solar Alliance (ISA)

- It is an alliance of solar-resource-rich countries (which lie either completely or partly between the Tropic of Cancer and the Tropic of Capricorn) who aim to address special energy needs.
- ISA aims to mobilize countries and resources to provide access to reliable and affordable solar energy, contributing to a sustainable future for all.
- The launch of the ISA was announced by the Prime Minister of India, Mr Narendra Modi, and former President of France, Mr Francois Hollande, at the 21st United Nations Climate Change Conference of the Parties in Paris, France.
- The alliance is a **treaty-based inter-governmental organization**.
- Countries that do not fall within the Tropics can join the alliance and enjoy all benefits as other members, with the **exception of voting rights**.
- After the United Nations, it is the largest grouping of states world-wide.
- The ISA is headquartered in **Gurgaon, India**.
- The alliance is also called **International Agency for Solar Policy and Application (IASPA)**.

IEP's Ecological Threat Register

Context

- More than 1 billion people face being displaced within 30 years as the climate crisis and rapid population growth drive an increase in migration with "huge impacts" for both the developing and developed worlds.



Graphic shows number of ecological threats by country and cumulative population displacement between 2008 and 2050.

More details

Institute for Economics and Peace (IEP's) first ever ecological threat register found that:

- The world had 60% less fresh water available than it did 50 years ago, while demand for food was predicted to rise by 50% by 2050 and natural disasters are likely to increase in frequency because of the climate crisis.
- Countries at risk from ecological threats (Nigeria, Angola, Burkina Faso and Uganda) are to experience population increases, further driving mass displacements.
- Mass displacement will lead to larger refugee flows to the most developed countries.

Ecological threats and World peace

- Ecological threats pose serious challenges to global peace.

- Lack of access to food and water will increase civil unrest, riots and conflict.
- **India and China, are most threatened by water scarcity.**
- Pakistan will be the country with the largest number of people at risk of mass migration, followed by Ethiopia and Iran.
- 16 countries including Sweden, Norway, Ireland, and Iceland, faced no threat.

Institute for Economics and Peace (IEP)

- It is a think tank.
- It produces annual global terrorism and peace indexes.

Living Planet Report 2020

Context

- The WWF's Living Planet Report 2020, released.

World Wide Fund for Nature (WWF)

- It is an international **non-governmental organization** founded in 1961.
- It works in the field of wilderness preservation and the reduction of human impact on the environment.
- It is the world's largest conservation organization.
- The **Living Planet Report** has been published **every two years by WWF** since 1998; it is based on a **Living Planet Index and ecological footprint calculation**.
- WWF has launched **Earth Hour campaign** and **Debt-for-Nature Swap**.
- It work in the six areas: food, climate, freshwater, wildlife, forests, and oceans

Key Findings

- There has been a reduction of 68 per cent in the global wildlife population between 1970 and 2016.
- 75 per cent of the Earth's ice-free land surface has already been significantly altered, most of the oceans are polluted.
- More than 85% of the area of wetlands has been lost.
- The most important direct driver of biodiversity loss in the last several decades are
 - land-use change,
 - conversion of pristine habitats into agricultural systems,
 - oceans overfished
 - species overexploitation
 - invasive species and diseases
 - pollution and climate change
- The **largest** wildlife population loss has been in **Latin America** at an alarming 94 per cent.
- One of the most threatened biodiversity globally has been freshwater biodiversity, which has been declining faster than that in oceans or forests.
- Almost 90 per cent of global wetlands have been lost since 1700.

India specific

- India is a "megadiverse country" with over 45,000 species of plants in only 2.4 per cent of the world's land area.
- India has already lost six plant species to extinction, according to the IUCN Red List.
- India has lost nearly one-third of its natural wetlands to urbanisation, agricultural expansion and pollution over the last four decades.
- WWF India's report on Water Stewardship for Industries revealed that 14 out of 20 river basins in India are water stressed and are moving towards extreme water scarcity by 2050.



Data insufficiency

- In India, adequate data, on different aspects regarding plant and animal species and their habitats, are not available.
- In the absence of this data, it becomes difficult to identify the problem and envisage a solution.

Greater One-Horned Rhinoceros

Context

- India is home to the largest number of Greater One-Horned Rhinoceros in the world with population in the range of 3000 animals in Assam, West Bengal and UP.
- Last year on the occasion of World Rhino Day (September 22), Environment Ministry has launched a National Conservation Strategy for Indian One-Horned Rhino.

National Rhino Conservation Strategy for India

- It called for active engagement between India and Nepal to conserve the greater one-horned rhinoceros.
- This strategy would pave the path for long-term conservation of rhinos.
- The single population of rhinos in Sukla-Phanta (Nepal), Valmiki tiger reserve (India) and Chitwan National Park (Nepal) and Dudhwa (India) is separated by the political boundary between the two countries.
- Instead of managing the two populations differ in the two countries, plan focus on themanaging rhino population with the same protocol.
- The plan calls for expanding distribution range as occurrence of 90 per cent of the rhino in one protected area is a cause of concern.
- It also calls for strengthening protection, having dedicated research and monitoring and strict enforcement.

Other Details

- The conservation initiatives for rhino has also enriched the grassland management, which helps in reducing the negative impacts of climate change through carbon sequestration.
- This is a first of its kind for the species in India, which aims to work for the conservation of the species under five objectives.
- The objectives include
 - strengthening protection,
 - expanding the distribution range,
 - research and monitoring, and
 - adequate and sustained funding.

Great Indian rhinoceros

- The Indian rhinoceros also called greater one-horned rhinoceros or great Indian rhinoceros is a rhinoceros species native to the Indian subcontinent.
- It is the only large mammal species in Asia to be down-listed from endangered to vulnerable in the International Union for Conservation of Nature, IUCN Red list in 2008.
- The extent and quality of the rhino's most important habitat are considered to be in decline due to hunting, agricultural development in tarai region and livestock encroachment.
- Indian rhinos once ranged throughout the entire stretch of the Indo-Gangetic Plain has reduced drastically to 11 sites in northern India and southern Nepal.

African Elephant Dying Due to Cyanobacteria

Context

- Toxins in water produced by cyanobacteria killed more than 300 elephants in Botswana.

What are Cyanobacteria?

- These are microscopic organisms common in water and sometimes found in soil.
- Not all produce toxins but toxic ones are occurring more frequently as climate change drives up global temperatures.
- Cyanobacterial blooms can harm both human and animals
- They prefer warmer water temperatures.

African elephants

- They are the **largest land animals** on Earth.
- They are slightly larger than their Asian cousins and can be identified by their larger ears (Asian elephants have smaller, rounded ears.).
- African elephants are a **keystone species**, meaning they play a critical role in their ecosystem.
- Also known as "**ecosystem engineers**," elephants shape their habitat in many ways.
- Poaching for the ivory trade is the biggest threat to African elephants' survival.
- They are listed as **Vulnerable** species on the IUCN Red List since 2004.

Nandankanan Zoological Park: Odisha

Context

- Authorities of the Nandankanan Zoological Park (NZP) are concerned over the back-to-back deaths of two sloth bears at the park.
- They probably died due to irreversible neurological disorders.
- Earlier, four eight elephants in the park died within a span of one month due to Elephant Endotheliotropic Herpesvirus (EEHV).

Nandankanan Zoological Park (NZP)

- It is a zoo and botanical garden in Bhubaneswar, Odisha, India.
- It is the first zoo in India to join World Association of Zoos and Aquariums (WAZA) in 2009.
- It enjoys a good reputation internationally for successfully breeding black panthers, gharials, and white tigers in captivity.

Sloth bear

- The sloth bear species are native to the Indian subcontinent.
- It mostly occurs in areas with forest cover, low hills bordering the outer range of the Himalayas from Punjab to Arunachal Pradesh.
- It is absent in the high mountains of Himachal Pradesh and Jammu and Kashmir, the northwestern deserts of Rajasthan, and a broad unforested swath in the south.
- It feeds on fruits, ants and termites.
- It is listed as Vulnerable on the IUCN Red List, mainly because of habitat loss and degradation.

Morphological Phenotypic Plasticity in Kalinga Frog

Context

- Indian scientists reported a first-of-its-kind discovery of morphological phenotypic plasticity (MPP) in the Kalinga cricket frog.

Morphological Phenotypic Plasticity (MPP)

- MPP is the ability of an organism to show drastic morphological (physical features) variations in response to natural environmental variations or stimuli.

Kalinga cricket frog

- This frog species was identified in 2018 and reported from the Eastern Ghats.
- It is endemic to the higher-elevation hill ranges of Odisha and Andhra Pradesh of the Eastern Ghats.
- Frogs are known to exhibit varied reproductive behaviours by adopting different modes and strategies for successful survival.
- Kalinga frog is a semi-aquatic frog that actively breeds in the monsoon.

Disposal of Cigarette Butts

Context

- The National Green Tribunal (NGT) has directed the Central Pollution Control Board (CPCB), to lay down guidelines pertaining to disposal of cigarette and beedi butts within three months.

Cigarette and beedi butts

- **Cellulose acetate** is a major component (95%) of the cigarette butts along with the wrapping paper and rayon.
- Its degradation studies show that it persists for a longer duration.
- Recycling of cellulose acetate after recovery from cigarette butts is suggested as the immediate solution to the problem until the degradation and safety data are generated
- Toxicity of cigarette butts can cause a human and environmental health risk.
- As per the Environment Ministry, cigarette butts are **not listed as hazardous** and Health Ministry maintained that they are **not biodegradable**.

Low Ozone Over Brahmaputra River Valley

Context

- Scientists at the Aryabhata Research Institute of Observational Sciences (ARIES), Nainital an autonomous research institute under the Department of Science and Technology (DST) Government of India have evaluated the near-surface ozone in the

Brahmaputra River Valley (BRV) and found a relatively low concentration of Ozone over Guwahati compared to the other urban locations in India.

Ground-level ozone

- Tropospheric, or ground-level ozone, is created by chemical reactions between oxides of nitrogen (NO_x) and volatile organic compounds (VOC).
- It usually increases when pollutants emitted by cars, power plants, industrial boilers, refineries, chemical plants, and other sources chemically react in the presence of sunlight, impacting human health.
- Its precursors are methane (CH₄) and Nonmethane hydrocarbons (NMHCs).
- It is a colourless and highly irritating gas.
- It has significant effects on human health. Exposure to ozone can cause premature mortality and a range of morbidity and asthma symptom.
- It can significantly impact vegetation and decrease the productivity of some crops.
- It can injure flowers and shrubs and may contribute to forest decline.
- Ozone can also damage synthetic materials, cause cracks in rubber, accelerate fading of dyes, and speed deterioration of some paints and coatings.
- It damages cotton, acetate, nylon, polyester and other textiles.

Net Present Value of Forests

Context

- Mines Ministry had requested that 'prospecting and exploring' in forests be exempted from Forest Conservation Act.

What is the issue?

- The Union Ministry of Mines has requested an expert advisory committee of the Environment Ministry to exempt it from the Supreme Court-mandated fees that prospectors pay when they dig exploratory boreholes in forests.

The Net Present Value (NPV)

- It is a monetary approximation of the value that is lost when a piece of forest land has been razed.
- It is based on the services and ecological value of forest.
- There are prescribed formulae for calculating this amount, which depends on the location and nature of the forest and the type of industrial enterprise that will replace a particular parcel of forest.
- The Supreme Court mandates this must be paid by those who use forest land for non-forestry purposes and only limited exemptions are permitted.
- NPV came into being after the recommendations of **Kanchan Gupta committee**.

SECURITY

Indra Navy – 20

Context

- The 11th edition of exercise INDRA NAVY, a **biennial bilateral maritime exercise between the Indian Navy and Russian Navy** held in the Bay of Bengal.

Other details

- Started in 2003.
- It symbolizes the long-term strategic relationship between the Indian and the Russian Navy.
- **Aim of the exercise:** "To consolidate inter-operability, improving understanding and imbibing best practices between the two navies".
- The Indian Navy represented guided-missile destroyer **Ranvijay**, indigenous frigate **Sahyadri** and fleet tanker **Shakti**.

Swabhimanchal

Why in news?

- Malkangiri district in Odisha, one of the most violence-hit areas got the uninterrupted cellular service.

Swabhimanchal (formerly known as Cut-off area)

- Due to threats from left-wing extremists, mobile towers could not be installed in this area.
- Located along the Odisha-Andhra Pradesh border, Swabhimanchal comprises 151 villages.

- It is surrounded by water on three sides and by inhospitable terrain on another.
- Malkangiri has been one of the most violence-hit districts in the country with as many as 332 Maoist incidents recorded in 12 years between 2008 and 2020.

ABHYAS

Context

- The successful flight test of ABHYAS - High-speed Expendable Aerial Target was conducted by Defence Research and Development Organisation.

Abhyas

- It is a **high-speed expendable aerial target (HEAT)**.
- It is being built by the Aeronautical Development Establishment (ADE) of the Defence Research and Development Organisation (DRDO) for the Indian Armed Forces.
- It is powered by a small gas turbine engine and has an Inertial Navigation System for navigation along with the Flight Control Computer for guidance and control.
- The vehicle is programmed for fully autonomous flight.

Significance

- Abhyas's radar cross-section (RCS), as well as its visual and infrared signatures, can be augmented to simulate a variety of aircraft for air-defence weapon practices.
- It can also function as a jammer platform and decoy.
- The HEAT system can be utilized to do away with the post-launch recovery mode, which is time-consuming and difficult in a scenario as the sea.

Laser Guided ATGM

Context

- The Defence Research and Development Organisation (DRDO) successfully test-fired a laser-guided Anti-Tank Guided Missile (ATGM) from the indigenous Arjun main battle tank.
- The missile employs a tandem High-Explosive Anti-Tank [HEAT] warhead to defeat Explosive Reactive Armour [ERA] protected armoured vehicles.
- It has been developed with multiple-platform launch capability and is undergoing trials from the gun of the Arjun.
- The DRDO's anti-tank missile (ATM) is a first-generation wire-guided missile developed in India.

Anti-Tank Guided Missile (ATGM)

- Also known as anti-tank missile, anti-tank guided weapon (ATGW) or anti-armour guided weapon is a guided missile primarily designed to **hit and destroy heavily armoured military** vehicles.
- ATGMs range in size from shoulder-launched weapons to larger tripod-mounted weapons.

PASSEX

Context

- Royal Australian Navy and Indian Navy warships completed two-day Passage Exercise (PASSEX) in the east Indian Ocean region.

Aim

- To enhance interoperability, improve understanding and imbibe best practices from each other.
- It involved advanced surface and anti-air exercises including weapon firing, seamanship exercises, naval manoeuvres and Cross Deck Flying Operations.

Passage Exercise (PASSEX)

- PASSEX are regularly conducted by the Indian Navy with units of friendly foreign navies.
- Indian Naval ships had conducted a Passage Exercise (PASSEX) with the U.S. and Russia navies.

Significance

- This exercise is conducted in the east Indian Ocean region, reflects the growing strength of Indo-Australian bilateral relations as comprehensive strategic partners, particularly in defence cooperation in the maritime domain.

JIMEX 2020

Context

- JIMEX-20 being conducted in a “non-contact at-sea-only format”, in the northern Arabia Sea amid Covid-19 restrictions.

JIMEX-20

- The India-Japan maritime bilateral exercise (JIMEX) is conducted biennially.
- Its last edition was conducted off the coast of Visakhapatnam in October 2018.
- “JIMEX-20 showcase a high degree of inter-operability and joint operational skills across the spectrum of maritime operations.
- Indian warships **Chennai, Teg, Tarkash** and fleet tanker **Deepak** took part in JIMEX-20.
- Significance:** “JIMEX-20 enhanced the cooperation and confidence between the two navies and fortify the long-standing bond of friendship between the two countries.

Project 17A

Why in news?

- The multi-role P17a with highly automated integrated weapon platforms will be soon made operational.

About PROJECT 17A

- The Nilgiri-class frigate or Project 17A is a follow-on of the Project 17 Shivalik-class frigate for the Indian Navy.
- Under this project, a total of seven ships will be built at Mazagon Dock and Garden Reach Shipbuilders & Engineers (GRSE).
- It demonstrates India’s indigenous capabilities to design, build and integrate systems for modern stealth combat ships.
- The P-17A class frigates are being built using indigenously developed steel and fitted with weapons and sensors along with the Integrated Platform Management System.
- These ships are having stealth features.
 - Stealth is the ability to evade detection by radar, infrared sensors or emission interception.
- P-17A ships will be loaded with indigenous state of the art electronic system, sensor suite.
- Another important feature is ship’s low acoustic noise emanating from propellers, operating machinery like Diesel Generators etc., which helps sonars on other ships to detect its presence.

Significance

- The Stealth P-17A frigates will play a critical role in India’s maritime domain.
- Will lead as the net security provider in the Indian Ocean region and beyond in the Indo-Pacific.
- To check China’s rogue posture, projecting aggressive behaviour in the Indian Ocean Region.

INS Viraat

Why in news?

- INS Viraat, the Aircraft Carrier with the longest service in the world, commenced its final journey of, to be broken at Alang in Gujarat and sold as scrap.
- Called as the Grand Old Lady of Indian Navy, it was decommissioned in 2017 after 30 years of service with Indian Navy and around 27 years before that in British Royal Navy.

British origin

- The ship was commissioned into the Royal Navy as HMS (Her Majesty’s Ship) Hermes in November 1959.
- The ship was in use since World War II.

India’s link

- The Indian Navy purchased it in 1985-86.
- The ship underwent a major refit and modernisation before being commissioned into the Indian Navy in May 1987 as INS (Indian Naval Ship) Viraat, which means enormous.

Service in Indian Navy

- INS Viraat proved pivotal in Operation Jupiter in 1989 during the Sri Lankan Peacekeeping operation.
- The ship was also deployed during 2001-02 operation Operation Parakram following the terror attack on the Indian Parliament.

Viraat’s decommissioning and what lies ahead

- With mounting operating costs and age, the Navy announced the decision to decommission Viraat in early 2015.

- Since 2017, India has been operating a single carrier — INS Vikramaditya.

INS Vikrant-Indigenous Aircraft Carrier on the anvil

- India's first Indigenous Aircraft Carrier (IAC-I) INS Vikrant which has a displacement comparable to Vikramaditya is under construction at Kochi Shipyard and is soon expected to undergo sea trials.

www.iasgyan.in



IMPROVE FROM
A SUB-PAR SCORE TO A
EXCEPTIONAL SCORE IN
UPSC CSE MAINS 2020

UPSC CSE MAINS TEST SERIES 2020



Paper evaluation
within 72 hours

Interactive Online
discussion for Full
Length Tests

Sample test available



mail: iasgyan@aptiplus.in

1. Consider the following statements:

1. Coal bearing act allows special relaxations for land acquisition only to state-owned companies.
2. Captive Coal Mining means that coal mined by a Company can't be sold but is used for its own purposes.

Which of the statements given above is/are correct?

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

2. Which of the following are the component under Jal Jeevan Mission:

1. Greywater management
2. Solid Waste Management
3. Development of in-village piped water supply

Which of the pairs given above is/are correct?

- a) 1 & 2 only b) 3 only
c) 1 & 3 only d) 2 & 3 only

3. Consider the following statements with regard to National Crime Record Bureau:

1. It acts as the National repository of fingerprints of all criminals.
2. National Police Mission works under it.

Which of the statements given above is/are correct?

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

4. Consider the following statements with assessment of Gross Domestic Product (GDP):

1. The National Statistical Office (NSO) compiles the data required to calculate the GDP.
2. Factor cost method to calculate GDP assesses the performance of eight different industries.

Which of the statements given above is/are correct?

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

5. Consider the following statements about the Pinaka Missile System:

1. It is named after Lord Shiva's bow.
2. It was first used in Operation Meghdoot.
3. It is indigenously developed by the Defence Research and Development Organisation (DRDO)

- a) 1 & 2 only b) 2 only
c) 1 & 3 only d) 1, 2 & 3

6. Consider the following statements in the context of the Budget 2020-21:

1. The Budget estimates kept the fiscal deficit target for 2020-21 at 2.7% of GDP.
2. Target for Primary deficit has been kept at 0.4% of GDP.

Which of the statements given above is/are correct?

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

7. Consider the following statements regarding the National Automotive Testing and R&D Infrastructure Project (NATRiP):

1. It is completely funded by the Government of India.
2. It aims to make Indian vehicles comply with the global standard of safety.

Which of the statements given above is/are correct?

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

8. Consider the following statements about the Pradhan Mantri Kisan Sampada Yojana:

1. It is a centrally sponsored scheme.
2. The scheme is being implemented by the Ministry of Agriculture and farmers welfare.

Which of the statements given above is/are correct?

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

9. Consider the following statements about the Poshan Abhiyan:

1. There is no provision under it to provide nutritious food.
2. It ensures convergence of various nutrition related schemes/interventions of various line Ministries.

Which of the statements given above is/are correct?

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

10. With reference to the National Intelligence Grid (NATGRID), consider the following statements:

1. It will assist the intelligence and law enforcement agencies in countering terror activity.
2. State Police can access the NATGRID data.

Which of the statement/s given above is/are correct?

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

11. Consider the following statements with respect to the Bhakti Movement:

1. Chaitanya Mahaprabhu elaborated his philosophy in Shikshashtakam.
2. Ramananda was the first Bhakti saint to use Hindi for the propagation of his message

Which of the statements mentioned above is/are correct?

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

12. Consider the following statement with regard to National Initiative for Developing and Harnessing Innovations (NIDHI) programme:

1. It has been launched by NITI Ayog.
2. Entrepreneurs-in- Residence (EIR) programme is one of the programs introduced under NIDHI to inspire the best talents to be entrepreneurs.

Select the correct answer using the code given below:

- a) 1 only b) 2 only

- c) Both 1 & 2 d) Neither 1 nor 2

13. Consider the following statement with regard to the Global Innovation Index-2020:

1. For the first time, India has been placed under top 50 countries.
2. It is released by the World Intellectual Property Organization (WIPO).
3. Across the world, there is a gradual shift of innovation towards eastward.

Select the correct answer using the code given below:

- a) 1 and 2 only b) 2 and 3 only
c) 1, 2 & 3 d) 1 and 3 only

14. Consider the following statements:

1. The term 'Other Backward Class (OBC)' is not mentioned in the Constitution.
2. Article 338 allows the President of India to appoint a commission to investigate issues related to OBC.

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

15. Consider the following statement with regard to the Indo - Pacific region:

1. No European nation has any formal strategy for Indo-Pacific region.
2. India has launched Indo-Pacific Ocean initiative (IPOI) in 2019 .

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

16. Consider the following statement with regard to Right to Education Act:

1. Medium of instruction needs to be mother tongue as far as practicable.
2. It makes provisions for a non-admitted child to be admitted to an age appropriate class. .

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

17. Which of the following are used as qualitative instruments of credit control by the Reserve Bank of India (RBI)?

1. Regulating Marginal requirements on Security Loans
2. Credit Rationing
3. Statutory Liquidity Ratio
4. Variable Cash Reserve Ratio

Select the correct answer using the code given below:

- a) 1, 2 & 3 only b) 1 & 2 only
c) 1, 3 & 4 only d) 3 & 4 only

18. Consider the following statements with respect to the Attorney General (AG) of India:

1. AG enjoys all the privileges and immunities that are available to a Member of Parliament.
2. AG has the right to take part in a meeting of any committee of the Parliament, but without a right to vote.

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

19. Consider the following statements regarding International Criminal Court (ICC):

1. The issue of cross-border terrorism and the use of nuclear arms and weapons of mass destruction are not part of the ICC's mandate.
2. The Rome Statute provides UN Security Council power to refer cases to the ICC.

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

20. Consider the following statements regarding biodiversity hotspot:

1. India hosts only two biodiversity hotspots .
2. The Critical Ecosystem Partnership Fund works to protect biodiversity hotspots and improve human well-being.

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

21. Which of the following factors influence Jet Streams?

1. Coriolis force
2. Landmasses
3. Earth's rotation

Select the correct answer using the code given below:

- a) 1 & 3 only b) 2 & 3 only
c) 1, 2 & 3 d) 1 & 2 only

22. Consider the following statements with regards to disinvestment of the Life Insurance Company (LIC):

1. LIC is not a company, but a statutory body.
2. Disinvestment of LIC requires amendments in LIC Act -1956.

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

23. Consider the following statements with regard to "asteroid":

1. NASA's PUNCH mission is targeted towards deflection of an asteroid .
2. Asteroids orbit sun just like other planets.

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

24. Consider the following statements:

1. English language has not been mentioned in the 8th Schedule.
2. There is no law, which requires issuance of official documents in any other vernacular language except Hindi and English.

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

25. Consider the following statements regarding the Global 200 Ecoregion:

1. It is an initiative of International Union for Conservation of Nature (IUCN).
2. It contains 200 ecoregions.

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

26. Consider the following statements with regard to "Sa-Dhan":

1. It is recognised as a National Support Organization (NSO) by the Reserve Bank of India.
2. It is recognized as a Self-Regulatory Organisation (SRO) by the National Rural Livelihood Mission (NRLM).

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

27. Consider the following statements about the Special Frontier Force:

1. It is not part of the Indian Army but functions under their operational control.
2. It works under the Research and Analysis Wing of India (RAW).

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

28. Consider the following statement with respect to MOTIHARI-AMLEKHGUNJ OIL PIPELINE:

1. It is an oil Pipeline between India and Bangladesh.
2. It is the first transnational Pipeline from India.

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

29. Consider the following statements:

1. Germ-line gene therapy can be transmitted vertically across generations.
2. Somatic cell gene therapy can not be passed on to subsequent generations.

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

30. Who is considered as a literate in India?

1. One who can only read, but cannot write.
2. One who can both read and write with understanding in any language.
3. One with a minimum formal education.

Select the correct answer using the code given below:

- a) 1 & 2 only b) 2 only
c) 1 & 3 only d) 2 & 3 only

31. Consider the following statements with regard to 24x7 toll-free mental health rehabilitation helpline 'KIRAN':

1. It has been launched by the Department of Social Justice and Empowerment.
2. It has been launched in 13 different languages.

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

32. Consider the statements with regard to the E-Kisan Mandi:

1. The Farmers Producer Company (FPCs) will run these e-kisan mandis.
2. Tribal Cooperative Marketing Development Federation of India Limited (TRIFED) will provide land for operation of these mandi.

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

33. Which of the following statement/s is/are correct?

1. Seonath, Ib, Hasdeo and Bhargavi river are the major tributaries of the Mahanadi river.
2. The Hirakud dam is an earthen dam built across the Mahanadi River.

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

34. Consider the following statements:

1. The first hour of every parliamentary sitting is termed as Question Hour and is mentioned in the Rules of Procedure of the House.
2. Zero Hour is an informal device, not mentioned in any rules of the Parliament.

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

35. Consider the following statements with respect to energy flow in an ecosystem:

1. The energy flow is bi-directional throughout the trophic levels.
2. The amount of energy flow decreases with successive trophic level.

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

36. Consider the following statements with respect to the National Commission for Backward Classes (NCBC):

1. It is a constitutional body.
2. The conditions of service and tenure of office of the Chairperson, Vice-Chairperson and other Members are determined by Parliament.

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

37. Consider the following statements with respect to the PM SVANidhi Scheme:

1. It is a special micro-credit facility plan to provide affordable loans of up to ₹10,000 to street vendors.
2. Small Industries Development Bank of India is the technical partner for the implementation of the scheme.

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

38. Consider the following statements:

1. Iron is the most abundant metal in the Earth's crust.
2. Oxygen is the second most abundant element in the Earth's crust

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

39. Bru (or Reang) tribe is recognised as a Particularly Vulnerable Tribal Group (PVTG) in which of the following state/s?

1. Assam
2. Tripura
3. Mizoram
4. Arunachal Pradesh

Select the correct answer using the code given below:

- a) 3 & 4 only b) 1 & 2 only
c) 2 only d) 1, 2 & 3 only

40. Consider the following statements with regard to the Monetisation of deficit:

1. It refers to the purchase of government bonds by the central bank.
2. RBI creates fresh money to purchase these bonds.

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

41. Consider the following statements:

1. The stone statues of Indus Valley Civilization show that the artists were capable of handling three dimensional volumes.

2. Compared to the stone and bronze statues the terracotta representations of human form are more refined in the Indus Valley.

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

42. Consider the following statements with respect to the Comptroller and Auditor-General (CAG) of India:

1. CAG audits all expenditures from the Consolidated Fund of India, contingency funds and Public Accounts.
2. The salary, allowances and other terms of service of the Comptroller and Auditor General of India are determined by the President.

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

43. Consider the following statements with respect to the FCRA (Foreign Contribution (Regulation) Act) 2010:

1. Organisations of Political nature are not entitled to receive foreign contributions.
2. A person can transfer the received foreign donations only to a person authorised to receive it under FCRA act.

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

44. Which of the following statements are correct?

1. The writ of Habeas Corpus can be issued against both public authorities as well as private individuals.
2. The writ of Prohibition can be issued against Judicial bodies, legislative bodies and administrative authorities.

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

45. Under the advisory jurisdiction of Supreme Court (Article 143), the SC must tender its opinion to the President:

1. On any question of law or fact of public importance which has arisen or which is likely to arise.
2. On any dispute arising out of any pre-constitutional treaty, agreement, covenant, engagement, Sanad or other similar instruments.

Select the correct answer using the code given below:

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

46. Choose the Correct Statement/ s about Sowa-Rigpa system of medicine:

1. It is based on the principles of Jung-wa-nga (panchamahabhutas) and Ngepa-Sum (Tridosa).

2. Dharamshala in Himachal Pradesh and Kerala are the main centers for Sowa-Rigpa in India.

Select the correct answer using code given below :

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

47. Choose the correct statements with respect to a term called 'ElectroSkin', recently seen in the news:

- "ElectroSkin" is a new fundamental building block for a range of soft next-generation robots.
- They are rigid and incompressible with the environment.

Select the correct answer using code given below :

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

48. Consider the following statements regarding "Climate Change Performance Index, 2020"

- The Climate Change Performance Index is released by German watch, Climate Action Network International and the New Climate Institute.
- The report states that the current level of per capita emissions and energy use in India ranks ninth in the higher category.

Select the correct answer using code given below :

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

49. Consider the following statements regarding the National Program for Prevention and Control of Cancer, Diabetes, CVD and Stroke (NPCDCS):

- The program is being implemented under the National Health Mission.
- The NPCDCS program has two components i.e Cancer and Tuberculosis (TB).

Select the correct answer using code given below :

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

50. Consider the following statements regarding rural society during 18th century India:

- The distinction between artisans and peasants in village society was rigid and no group performed the task of the other.
- 'Jajmani System' was the method of remuneration in which artisans received a piece of land in lieu of their services.

Select the correct answer using code given below :

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

51. Choose the Correct Statement/ s about Sowa-Rigpa system of medicine:

- It is based on the principles of Jung-wa-nga (panchamahabhutas) and Ngepa-Sum (Tridosha).
- Dharamshala in Himachal Pradesh and Kerala are the main centers for Sowa-Rigpa in India.

Select the correct answer using code given below :

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

52. Consider the following statements with respect to T-cells:

- T cells are a part of the lymphatic system.
- T cells originate in the bone marrow and mature in the thymus.
- They are responsible for removing the pathogens from the body.

Select the correct answer using code given below :

- a) 1 only b) 2 & 3 only
c) 1 & 3 only d) 1, 2 & 3

53. Consider the following statements with respect to Enemy Property in India:

- Movable property is not included under 'enemy properties'.
- The law of succession does not apply to enemy property.
- Among the properties left behind by Pakistani nationals, the highest properties are located in the Union Territory of Jammu and Kashmir.

Select the correct answer using code given below :

- a) 1 only b) 2 only
c) 1 & 3 only d) 3 only

54. In the context of marginal products consider the following statements:

- Marginal products are reductions to total products.
- Marginal product is the change in output per unit of change in input when all other inputs are held constant.

Select the correct answer using code given below :

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

55. Consider the following statements with respect to Department Related Standing Committees (DRSCs):

- The DRSCs were created for the first time in 1993.
- The members are nominated by the Speaker and the Rajya Sabha Chairman for a term of 1 year.
- Ministers cannot be nominated as the members of the committee

Select the correct answer using code given below :

- a) 1 only b) 1 & 3 only
c) 1 & 2 only d) 1, 2 & 3

56. Consider the following statements:

- An Interest Rate Derivative (IRD) is a contract whose value is derived from one or more interest rates or interest rate indices.
- An interest rate swap is a forward contract in which one stream of future interest payments is exchanged for another based on a specified principal amount.

Select the correct answer using code given below :

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

57. Consider the following statements in relation to the Chief Justice of India (CJI) being recognised as the "Master of the Roster":

1. It is a tenet of judicial discipline in India and a principle of Justice delivery system.
2. It is a rule framed by the Supreme Court to conduct its business.

Select the correct answer using code given below :

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

58. Consider the following statements with respect to the Defence Technology and Trade Initiative (DTTI):

1. It is a mechanism between Russia and India, established to strengthen the opportunities in the field of defence.
2. Its aim is to bring sustained leadership focus to the bilateral defence trade relationship and create opportunities for co-production and co-development of defence equipment.

Select the correct answer using code given below :

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

59. Consider the following statements with respect to the DISHA Scheme:

1. It is an early intervention and school readiness scheme for children in the age group of 0-14 years.
2. It covers children with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities.

Select the correct answer using code given below :

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

60. Consider the following statements:

1. Ramsar Convention was established by UNESCO.
2. Chilika Lake and Keoladeo National Park were the first ones to be recognized as Ramsar Sites of India.
3. Rajasthan has two Ramsar sites.

Select the correct answer using code given below :

- a) 1 & 2 only b) 2 & 3 only
c) 1 & 3 only d) 1, 2 & 3

61. Consider the following statements with respect to the Gwadar Port:

1. It is a warm water deep sea port.
2. The port is located in Pakistan's Balochistan province.
3. The China Pakistan Economic Corridor will connect Gwadar Port with China's Xinjiang province.

Select the correct answer using code given below :

- a) 1 & 2 only b) 2 & 3 only
c) 1 & 3 only d) 1, 2 & 3

62. Consider the following statements with respect to the Pangong Tso:

1. It is an endorheic brackish water lake.
2. It is identified as a wetland of international significance under the Ramsar Convention.

Select the correct answer using code given below :

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

63. With reference to the features of a perfectly competitive market, consider the following statements:

1. All firms in the market produce certain heterogeneous goods/services.
2. In such a market buyers must accept the prevailing prices but the sellers have the freedom to influence the prices.

Which of the statements given above is/are correct?

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

64. Consider the following statements with respect to Members of Parliament Local Area Development Scheme (MPLADS):

1. It is a centrally-sponsored scheme.
2. Under the scheme, funds are released in the form of grants in-aid directly to the district authorities.
3. The funds released under the scheme are non-lapsable.

Which of the given statement/s is/are correct?

- a) 1 and 3 only b) 2 and 3 only
c) 1, 2 and 3 d) 1 and 2 only

65. Consider the following statements with respect to National Bamboo Mission:

1. It is a sub-scheme under Mission for Integrated Development of Horticulture (MIDH).
2. National Bamboo Mission is a Central Sector scheme.

Which of the given statement/s is/are INCORRECT?

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

66. Consider the following statements about the "Bodo Peace Accord":

1. According to this Accord, the Government of Assam will notify Bodo language in Devanagari script as the associate official language in that state.
2. BTAD (Bodoland Territorial Autonomous District) is spread over four districts of Kokrajhar, Chirang, Baksa and Udalguri.
3. The BTAD and other areas mentioned under the fourth Schedule of the Constitution have been exempted from the Citizenship (Amendment) Act (CAA), 2019.

Select the correct answer using code given below :

- a) 1 only b) 1 & 2 only
c) 3 only d) 1, 2 & 3

67. Consider the following statements about the GEMINI (GAGAN Enabled Mariner's Instrument for Navigation and Information):

1. GEMINI (GAGAN Enabled Mariner's Instrument for Navigation and Information) is a new marine information dissemination system.
2. It is developed by INCOIS under the Ministry of Earth Sciences and Airport Authority of India.

Select the correct answer using code given below :

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

68. Consider the following statements regarding the National Green Tribunal (NGT):

1. The National Green Tribunal, established in 2010, as per the National Green Tribunal Act is a specialised judicial body equipped with expertise solely for the purpose of adjudicating environmental cases in the country.
2. The Tribunal has a presence in five zones- North, Central, East, South and West. The Principal Bench is situated in the North Zone, headquartered in Delhi.

Select the correct answer using code given below :

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

69. Which of the following existing laws are going to be subsumed under the proposed Social Security Code Bill?

1. Provident Fund Act, 1952
2. Maternity Benefit Act, 1961
3. Unorganised Workers' Social Security Act, 2008
4. Contract Labour Act, 1970
5. Inter-State Migrant Workers Act, 1979

Which of the given statement/s is/are correct?

- a) 1, 2 & 3 only b) 1, 2, 3 & 4 only
c) 1, 2, 3, 4 & 5 d) 1 & 3 only

70. Consider the following statements with respect to the Pulikkali:

1. It is a folk dance performed on the streets of Kerala as a part of Onam celebrations.
2. It is performed to the rhythm of traditional percussion instruments such as mridangam and ghatam.

Which of the given statement/s is/are correct?

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

71. Consider the following statements with respect to UMANG App:

1. It is a common unified platform for the delivery of services of various Government Departments through the mobile platform.
2. It was developed by the National e-Governance Division (NeGD), Ministry of Electronics & IT (MeitY).

3. The app hosts services such as Digilocker and e-RaktKosh.

Which of the given statement/s is/are correct?

- a) 1 only b) 2 only
c) 1, 2 & 3 d) 1 & 3 only

72. Consider the following statements with respect to the Integrated Disease Surveillance Programme (IDSP):

1. It was started by the Ministry of Health and Family Affairs with the assistance of the World Health Organisation.
2. It was launched in the backdrop of the COVID-19 pandemic in 2020 to strengthen the decentralized laboratory based IT enabled disease surveillance system.

Which of the given statement/s is/are INCORRECT?

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

73. Consider the following statements with respect to the National Institutional Ranking Framework (NIRF):

1. It ranks higher educational institutions across India.
2. 90% of the parameters in NIRF are completely objective and fact-based, while only 10% is based on the subjective parameter of perception by academic peers and employers.

Which of the given statement/s is/are incorrect?

- a) 1 only b) 2 only
c) Both 1 & 2 d) Neither 1 nor 2

74. Consider the following statements:

1. In the revenue administration of Delhi Sultanate, the in-charge of revenue collection was known as 'Amil'.
2. The Iqta system of Sultans of Delhi was an ancient indigenous institution.
3. The office of 'Mir Bakshi' came into existence during the reign of Khalji Sultans of Delhi.

Which of the statements given above is/are correct?

- a) 1 only b) 1 & 2 only
c) 3 only d) 1, 2 & 3

75. Consider the following statements with respect to the Fundamental Duties:

1. The concept of Fundamental Duties has been borrowed from the Irish Constitution.
2. Fundamental Duties were added to the Indian Constitution on the recommendations of the Swaran Singh Committee.
3. While the 42nd Amendment added 8 Fundamental Duties to the Indian Constitution, the rest were added through the 86th Amendment.

Which of the given statement/s is/are correct?

- a) 1 & 2 only b) 2 only
c) 1 & 3 only d) 2 & 3 only

ANSWERS

1. c	16. c	31. b	46. a	61. d
2. c	17. b	32. a	47. a	62. a
3. a	18. a	33. c	48. c	63. d
4. b	19. c	34. c	49. a	64. c
5. c	20. b	35. b	50. d	65. b
6. b	21. c	36. a	51. a	66. b
7. c	22. c	37. c	52. d	67. c
8. d	23. b	38. d	53. b	68. c
9. c	24. c	39. c	54. b	69. a
10. a	25. d	40. c	55. d	70. a
11. c	26. d	41. a	56. c	71. c
12. b	27. c	42. a	57. c	72. c
13. c	28. b	43. c	58. b	73. d
14. a	29. c	44. a	59. b	74. a
15. b	30. b	45. b	60. d	75. b