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## Program Delivery



### GS Subject-wise Comprehensive Tests

Master each and every subject with 18 Subject-Wise Tests that provide in-depth coverage of all the important topics.

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Enhance your knowledge with Two Thematic Tests focusing on crucial areas like Maps, Budget, and Economic Survey.

### Simulator

Practice makes perfect! **निश्चय** includes 10 GS tests and 7 CSAT Tests, offering a realistic exam experience.

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Learn from the past to succeed in the future. Access the last 5 years' UPSC papers with detailed solutions.

### Discussion Videos

Gain valuable insights from our experts through discussion videos covering the fundamentals of the Civil Services Exam and strategies to solve multiple-choice questions.

### Monthly Current-Affairs Magazine

Get access to **APTI PLUS** Academy's exclusive Monthly Current Affairs Journal "The IAS Gazette", and stay updated with the latest happenings from around the world.

## Incremental Value Addition

### Fundamental level

Micro Topic-Listing will break down complex subjects into manageable chunks making your preparation more effective.

Sectional Tests will help you build a solid foundation in each subject, boosting your fundamentals to new heights.

### Applied level

Each Foundational Test and Revision Test includes 20 questions on current affairs, bridging the gap between static and dynamic knowledge which will help you stay ahead of the curve keeping you updated.

Subject-wise tests will ensure comprehensive coverage of the syllabus, empowering you with in-depth knowledge in every subject.

### Comprehensive level

These Full-Length Tests will validate that your preparation is complete and you have achieved that extra edge to succeed in CSE Prelims.

### Appraisal

Detailed Test Reports & Analysis will help you unlock valuable insights to enhance your strategy.

Performance Evaluation will help you fine-tune your preparation, maximizing your chances of success.

## 100% REFUND POLICY\*

An aspirant may apply for a refund, once she/he has appeared at least 5 Tests. On not being satisfied the aspirant needs to furnish reasons behind the same and put forward substantial evidence pertaining to the quality of Tests. The aspirant will be eligible for a full refund if the Management deems it to be fit subject to nominal deduction of GST and payment gateway charges.

\*Terms and Conditions Apply





presents

## All India UPSC CSE Prelims Test Series Program 2024

# निश्चय

### Program Objective

**निश्चय** is a carefully crafted Prelims Test Series Program that equips CSE aspirants with the right mindset and approach to crack UPSC Prelims Examination in their very first attempt. **निश्चय** provides aspirants with a 360-degree coverage of the entire spectrum of the UPSC prelims syllabus. This program is meticulously synchronized to replicate the parameters of the actual UPSC exam.

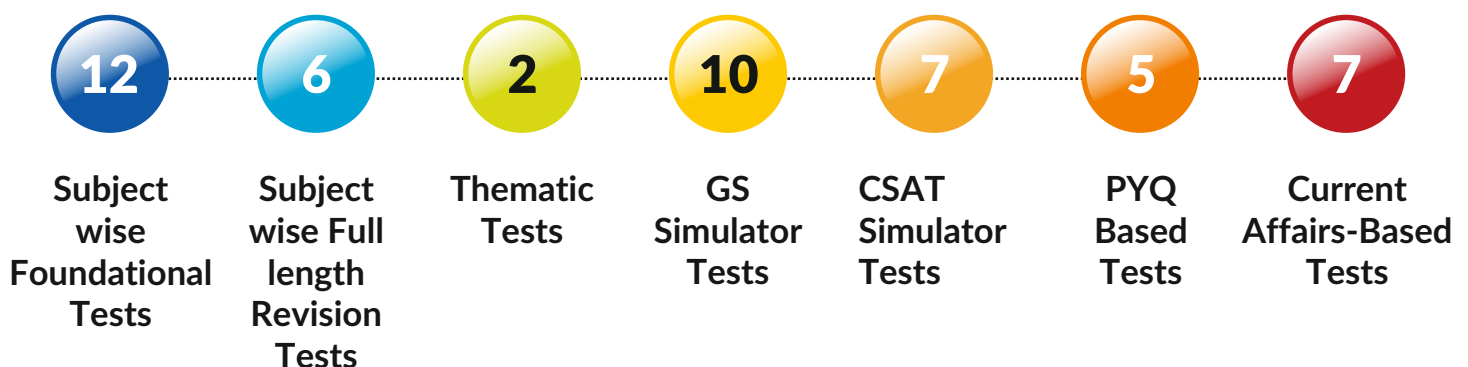
### Approach

This program is more than just a collection of practice test. **निश्चय** is a transformative experience that empowers CSE aspirants with the confidence, strategy, and knowledge needed to excel in the UPSC Preliminary Examination. **निश्चय** Test Package includes a range of subject-wise comprehensive Tests, Thematic Tests, Simulator Tests, Previous Years' Solved Papers, and Current Affairs-Based Tests.

That's not all! It also includes In-Depth Discussion Videos on the fundamentals of the CSE unlocking the strategies to tackle multiple-choice questions effectively. Further, Pre-Recorded Discussion Videos offer detailed analyses and explanations of each test, allowing aspirants to learn from experts and enhance their understanding of key concepts.

Additionally, aspirants will have free access to APTI PLUS Academy's Monthly Journal for Current Affairs "The IAS Gazette" along with compilations of Daily Prelims Practice Tests, which will help them stay ahead in the competition.

### Number of Tests





All India UPSC CSE Prelims Test Series Program 2024

निश्चय

# Demo Test

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Subject for Demo Test



**Polity**



**Geography**



**Economy**



**Sc. & Tech. and  
Environment**



**History**



## Detailed Schedule of the Test Series Programme

[For Batch AP/CSE/01-23 starting from July 2023]

### Foundational Tests

Test ID	Subject	Syllabus	Date
TEST 01	Indian Polity-I + May-June 2023 Current Affairs	<ul style="list-style-type: none"> <li>• Historical Background of the Constitution</li> <li>• Salient features of the Constitution</li> <li>• Preamble of the Constitution</li> <li>• The Union and its Territory</li> <li>• Citizenship</li> <li>• Fundamental Rights, Directive Principles, Fundamental Duties</li> <li>• Amendment</li> <li>• Emergency Provisions</li> <li>• Central Government (President, Vice- President, Prime minister, Central Council of Ministers)</li> <li>• Parliament</li> </ul>	13th August 2023
TEST 02	Indian Economy-I + May-June 2023 Current Affairs	<ul style="list-style-type: none"> <li>• National Income Accounting</li> <li>• Money and Banking</li> <li>• Inflation</li> <li>• Employment</li> </ul>	20th August 2023
TEST 03	Geography-I + July 2023 Current Affairs	<ul style="list-style-type: none"> <li>• Physical Geography of the World</li> <li>• Solar System &amp; the Earth</li> <li>• Geomorphology</li> <li>• Climatology</li> <li>• Oceanography</li> <li>• Biogeography</li> <li>• Natural Hazards and Disasters</li> <li>• Continents (Land, Climate, Resources etc.)</li> <li>• Fundamentals of Human Geography</li> </ul>	27th August 2023
TEST 04	Environment and Ecology-I + July 2023 Current Affairs	<ul style="list-style-type: none"> <li>• Ecosystem and Ecology</li> <li>• Biodiversity</li> <li>• Environmental Pollution</li> <li>• Environmental Impact Assessment</li> <li>• Conservation of environment</li> <li>• Climate Change</li> <li>• Environmental Conferences and conventions</li> <li>• Environmental Legislations</li> <li>• Environmental Organisations</li> </ul>	3rd September 2023

## Detailed Schedule of the Test Series Programme

[For Batch AP/CSE/01-23 starting from July 2023]

### Foundational Tests

Test ID	Subject	Syllabus	Date
TEST 05	History of India (Art and Culture and Ancient History) + August 2023 Current Affairs	<p><u>Culture:</u></p> <ul style="list-style-type: none"> <li>Architecture and Sculptures</li> <li>Religion and Philosophy</li> <li>Indian paintings</li> <li>Indian Music</li> <li>Indian Dances</li> <li>Indian Theatres</li> <li>Indian cinema</li> <li>Indian Language &amp; Literature</li> <li>Arts &amp; Crafts</li> <li>Science and Technology</li> </ul> <p><u>Ancient History:</u></p> <ul style="list-style-type: none"> <li>Prehistoric period</li> <li>Harappan / Indus Valley Civilization</li> <li>Vedic Age</li> <li>Mahajanapadas</li> <li>Mauryan Age &amp; Post Mauryan Age</li> <li>Sangam Age</li> <li>Guptas Age</li> <li>Post Guptas Age</li> </ul>	10th September 2023
TEST 06	Basics of Science + August 2023 Current Affairs	<ul style="list-style-type: none"> <li>Physics: Standards and units, Mechanics and properties of matter, Heat, Sound, Optics, Electricity and Magnetism, Atomic and Nuclear physics, Modern Physics, Astronomy and Space Science</li> <li>Chemistry: Matters and its nature, Chemical Reactions and Equations, Structure of the Atom, Periodic classification of elements, Chemical Bonding, Carbon and its compound, Acid, Bases and Salts, Metals and Non-metals, Thermodynamics, Nanotechnology, Agricultural Chemistry, Medicinal Chemistry, Food Chemistry, Bio Chemistry, Polymers and Plastics</li> <li>Biology: Introduction, Cell Biology, Life processes, Biocommunication, Diseases and Defence Mechanism, Nutrition, Origin and Evolution of life, Genetics, Plant Biology</li> </ul>	17th September 2023
TEST 07	Indian Polity-II + September 2023 Current Affairs	<ul style="list-style-type: none"> <li>State Government (Governor, Chief Minister, State Council of Ministers, State Legislature)</li> <li>Cooperative Societies</li> <li>Official Language</li> <li>Tribunals</li> <li>Special Provisions relating to certain classes.</li> <li>Political parties, Representation of People Act, Elections, Anti Defection</li> <li>Constitutional Bodies</li> <li>Non-Constitutional Bodies</li> </ul>	9th October 2023

## Detailed Schedule of the Test Series Programme

[For Batch AP/CSE/01-23 starting from July 2023]

### Foundational Tests

Test ID	Subject	Syllabus	Date
TEST 08	Economy-II + September 2023 Current Affairs	<ul style="list-style-type: none"> <li>Budgeting and Fiscal Policy</li> <li>Capital Market</li> <li>Agriculture, Industry, Services</li> <li>Infrastructure and Communication</li> <li>Planning and Reforms</li> <li>India and International Institutions</li> <li>External Sector</li> <li>Taxation</li> <li>Public Finance</li> </ul>	23rd October 2023
TEST 09	Geography-II + October 2023 Current Affairs	<p><b>Physical Geography of India:</b></p> <ul style="list-style-type: none"> <li>Location, Area and Boundaries</li> <li>Structure and Relief: Physiographic Divisions Drainage System Weather, Climate and Seasons</li> <li>Soils</li> <li>Natural Vegetation, Plant and Animal Life</li> </ul> <p><b>Economic and Human Geography - India:</b></p> <ul style="list-style-type: none"> <li>Agriculture</li> <li>Land Resources</li> <li>Water Resources</li> <li>Mineral and Energy Resources</li> <li>Industries</li> <li>Transport and Communication</li> <li>Population, Migration</li> <li>Settlements</li> </ul>	6th November 2023
TEST 10	Environment and Ecology-II + October 2023 Current Affairs	<ul style="list-style-type: none"> <li>Climate Change: Melting of glaciers, global warming, National action plan, carbon sequestration, carbon sink etc.</li> <li>Environmental Conferences and conventions: Kyoto Protocol, Montreal Protocol, Stockholm convention, Convention to Combat Desertification, CBD etc.</li> <li>Environmental Legislations: Environmental Protection Act 1986, Wildlife Protection Act 1972, Biodiversity Act 2002 etc.</li> <li>Environmental Organizations: UNFCCC, IUCN, CITES, Animal Welfare Board, National Ganga River Basin Authority etc.</li> <li>Wildlife Sanctuaries, National Parks and Biosphere Reserves</li> </ul>	20th November 2023



## Detailed Schedule of the Test Series Programme

[For Batch AP/CSE/01-23 starting from July 2023]

### Foundational Tests

Test ID	Subject	Syllabus	Date
TEST 11	History of India (Medieval India and Modern India) + November 2023 Current Affairs	<p><b>Medieval India:</b></p> <ul style="list-style-type: none"> <li>• Early Medieval Period</li> <li>• North India &amp; South India</li> <li>• Sultanate Period</li> <li>• The Delhi Sultanate</li> <li>• Vijayanagar &amp; other Kingdoms</li> <li>• Religious Movements</li> <li>• Bhakti Movement, Sufi Movement</li> <li>• Mughal Period</li> <li>• Maratha Confederacy</li> </ul> <p><b>Modern India:</b></p> <ul style="list-style-type: none"> <li>• India in the late Eighteenth Century</li> <li>• The Advent of the Europeans and British Conquest of India</li> <li>• The British Administrative Structure, Reform, Impact and Organization of Government of India</li> <li>• Social - Religious Movements in 19th - 20th centuries</li> <li>• Freedom Struggle: The Revolt of 1857 &amp; change after 1857</li> <li>• Moderate Phase(1885 - 1905), Reforms /Acts / Committee, Congress, Session, Governor -General Viceroy, Policies</li> <li>• Tribal &amp; Peasant Movements etc.</li> <li>• Freedom Struggle: Extremist Phase (1905-17): Emergence of Extremist &amp; Leaders, The Partition of Bengal, Morley-Minto Reforms, Swadeshi Movement, Home Rule</li> <li>• Freedom Struggle: The Gandhian Era (1917- 47): Gandhi - Advent and Achievement, Rowlatt Act, Jallianawala Bagh Massacre and Khilafat Movement, Non- Cooperation, Civil Disobedience and Quit India Movement, British Response and Negotiations, INA</li> </ul>	4th December 2023
TEST 12	Science and Technology + November 2023 Current Affairs	<ul style="list-style-type: none"> <li>• Space technology - Special focus on ISRO</li> <li>• Defense</li> <li>• Biotechnology</li> <li>• Emerging trends in Health, and disease</li> <li>• Nuclear technology</li> <li>• ICT</li> <li>• Intellectual Property Rights</li> <li>• Energy</li> <li>• Nanotechnology</li> </ul>	18th December 2023



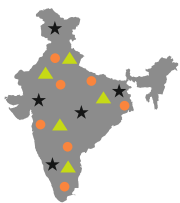
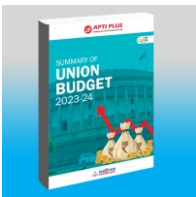
## Detailed Schedule of the Test Series Programme

[For Batch AP/CSE/01-23 starting from July 2023]

### Revision Tests

Test ID	Subject	Syllabus	Date
TEST 13	Indian Polity + December 2023 Current Affairs	Full Syllabus	1st January 2024
TEST 14	Indian Economy + December 2023 Current Affairs	Full Syllabus	15th January 2024
TEST 15	Geography + May-December 2023 Current Affairs	Full Syllabus	29th January 2024
TEST 16	History of India + January 2024 Current Affairs	Full Syllabus	12th February 2024
TEST 17	Environment & Ecology + January 2024 Current Affairs	Full Syllabus	19th February 2024
TEST 18	Science & Technology + December 2023 Current Affairs	Full Syllabus	26th February 2024

### Thematic Tests

Test ID	Theme	Date
TEST 19	 <p>Maps</p>	14th February 2024
TEST 20	 <p>Budget &amp; Economy Survey</p>	28th February 2024

## Detailed Schedule of the Test Series Programme

[For Batch AP/CSE/01-23 starting from July 2023]

### Simulator Tests

Test ID	General Studies	CSAT	Date
TEST 21	GS FLT 1 + February 2024 Current Affairs	-	4th March 2024
TEST 22	GS FLT 2 + February 2024 Current Affairs	-	11th March 2024
TEST 23	GS FLT 3 + May-23 to Feb-24 Current Affairs	-	18th March 2024
TEST 24	GS FLT 4	CSAT FLT 1	25th March 2024
TEST 25	GS FLT 5	CSAT FLT 2	1st April 2024
TEST 26	GS FLT 6	CSAT FLT 3	8th April 2024
TEST 27	GS FLT 7	CSAT FLT 4	15th April 2024
TEST 28	GS FLT 8	CSAT FLT 5	22nd April 2024
TEST 29	GS FLT 9	CSAT FLT 6	6th May 2024
TEST 30	GS FLT 10	CSAT FLT 7	20th May 2024

### Previous Year Questions Based Tests

Test ID	Subject	Syllabus
TEST 31	Indian Polity	PREVIOUS YEAR UPSC CSE, CAPF, CDS AND ESE
TEST 32	Economy	PREVIOUS YEAR UPSC CSE, CAPF, CDS AND ESE
TEST 33	Geography of India And The World	PREVIOUS YEAR UPSC CSE, CAPF, CDS AND ESE
TEST 34	History	PREVIOUS YEAR UPSC CSE, CAPF, CDS AND ESE
TEST 35	Environment & Science And Technology	PREVIOUS YEAR UPSC CSE, CAPF, CDS AND ESE

## Detailed Schedule of the Test Series Programme

[For Batch AP/CSE/01-23 starting from July 2023]

### Current Affairs Tests

Test ID	Subject
TEST 36	CURRENT AFFAIRS MAY 2023 - JUNE 2023
TEST 37	CURRENT AFFAIRS JULY 2023 - AUG 2023
TEST 38	CURRENT AFFAIRS SEP 2023 - OCT 2023
TEST 39	CURRENT AFFAIRS NOV 2023 - DEC 2023
TEST 40	CURRENT AFFAIRS JAN 2024 - FEB 2024
TEST 41	CURRENT AFFAIRS MAR 2024 - APR 2024
TEST 42	CURRENT AFFAIRS MAY 2023 - APR 2024

### Pre-Recorded Class Videos

Session ID	Subject
Session 01	What determines success in IAS exam?
Session 02	How to prepare GS and CSAT for IAS Prelims 2024?
Session 03	How to make notes for IAS 2024?
Session 04	How to prepare current affairs?
Session 05	Tricks to score high and reduce negative marking in IAS 2024?

## Books and Resources

### CURRENT AFFAIRS:

- Newspapers: Hindu, Business Line, Financial Times, Indian Express (any two)
- Monthly current affairs: The IAS Gazette
- IAS GYAN website
- Down to earth, Science Reporter
- IASGYAN Prelims Xpress Compilation
- IASGYAN Daily Prelims test
- IAS GYAN Mock tests

### POLITY and GOVERNANCE:

- NCERTs 9th, 10th (for basic understanding)
- Acts/Bills, judgements-PRS website
- Constitution of India at Work (Class XI) NCERT Publication
- Indian Polity by Laxmikant
- Introduction to Indian Constitution – D.D.Basu
- From Government to Governance by Kuldeep Mathur
- Ethics in Governance, ARC Report
- NITI Aayog reports, Government reports
- Governance in India by M.Karthikeyan

### HISTORY:

- Ancient History of India: Old NCERT by RS Sharma/ TN class

- 11th book
- Medieval History of India: Old NCERT by Satish Chandra/ TN class 11 th book
- Modern History
- NCERTs
- Plassey to Partition Book
- Spectrum
- India's Struggle for Independence – Bipan Chandra (Selective Reading)
- Indian Art and Culture
- An Introduction to Indian Art – Class XI NCERT
- Chapters related to culture in Ancient and Medieval India NCERTs
- Centre for Cultural Resource and Training (CCRT) material
- Heritage Crafts: Living Craft Traditions of India -NCERT
- Nitin Singhania book (optional)

### ENVIRONMENT AND BIODIVERSITY:

- Shankar IAS Book
- Biology 12th NCERT last 4 chapters

### GEOGRAPHY:

- Fundamentals of Physical Geography XI NCERT
- India: Physical Environment XI NCERT

- Fundamentals of Human Geography XII NCERT
- India: People and Economy XII NCERT
- Certificate Physical and Human Geography: GC Leong
- OXFORD Atlas

### ECONOMY AND AGRICULTURE:

- Indian Economy by Ramesh Singh
- Microeconomics, Macroeconomics – NCERT Class XI, XII
- Indian Economic Development – NCERT Class XI
- Indian Economy by Sanjiv Verma
- Economics Dictionary published by Collins & Penguin

### SCIENCE AND TECHNOLOGY:

- NCERT- Class 6th to 10th
- NCERT - Biology - 11th (Unit IV & V only - read basic concepts not technical details)
- NCERT Biology - 12th (Chapters 4, 5 and rest from 7 to 16)
- NCERT - Biology - 12th (OLD) - Chapter 9 onwards
- NCERT - Physics - 11th (Chap 1,5 & 8) and 12th (Chap 15 only)
- NCERT - Chemistry - 11th (Chap 1 & 14 only) and 12th (Chap 14 & 16 only)





## Micro-topics listing of the Test Series Programme

Test ID	Subject	Syllabus
Test 01	Indian Polity - I + May-June 2023 Current Affairs	<ul style="list-style-type: none"> <li>Historical Background of the Constitution</li> <li>Salient features of the Constitution</li> <li>Preamble of the Constitution</li> <li>The Union and its Territory</li> <li>Citizenship</li> <li>Fundamental Rights, Directive Principles, Fundamental Duties</li> <li>Amendment</li> <li>Emergency Provisions</li> <li>Central Government (President, Vice- President, Prime minister, Central Council of Ministers)</li> <li>Parliament</li> </ul>

### A Historical Background of the Indian Constitution

- Regulating Act of 1773
- Pitt's India Act of 1784
- Charter Act of 1793
- Charter Act of 1813
- Charter Act of 1833
- Charter Act of 1853
- Government of India Act of 1858
- Indian Councils Act of 1861
- Indian Councils Act of 1892
- Indian Councils Act of 1909
- Government of India Act of 1919
- Government of India Act of 1935
- Indian Independence Act of 1947

### B Making of the Indian Constitution

- Creation of the Constituent Assembly
- Working of the Constituent Assembly
- Objectives Resolution
- Committees of the Constituent Assembly
- Enforcement of the Constitution

### C Salient Features of the Constitution

- Sources of the Constitution
- Key Features of the Constitution
- Important Parts, Articles and Schedules of the Constitution

### D Preamble of the Constitution

- Keywords of the Preamble
- Significance of the Preamble
- Important court Judgments

### E Union and its Territory

- Reorganization of the states
- Evolution of the States and Union Territories

### F Citizenship

- Constitutional provisions
- Acquisition of Citizenship
- Loss of Citizenship
- Overseas Citizenship of India (OCI)

### G Fundamental Rights

- Key Features of fundamental rights
- Right to Equality
- Right to Freedom
- Right against Exploitation
- Right to Freedom of Religion
- Cultural and Educational Rights
- Right to Constitutional remedies
- Exceptions of fundamental rights

### H Directive Principles of State Policy

- Features of Directive Principles
- Classification of Directive Principles
- Significance of Directive Principles

### I Fundamental Duties

- Origin of Fundamental Duties
- Key Features of Fundamental Duties
- Significance of Fundamental Duties

### J Amendment of the Constitution

- Procedure for the Amendment
- Types of Amendments

### K Emergency Provisions

- National Emergency
- President's Rule
- Financial Emergency

### L Central Government

#### President

- Election and Qualification
- Impeachment
- Powers and functions
- Veto power
- Ordinance making power
- Pardoning power

#### Vice-President

- Election and removal
- Powers and functions

#### Prime Minister

- Appointment
- Powers and functions

#### Central Council of Ministers

- Constitutional Provisions
- Appointment of Ministers
- Responsibility of Ministers
- Difference between the Council of Ministers and Cabinet Minister



## Micro-topics listing of the Test Series Programme

Test ID	Subject	Syllabus
Test 02	Indian Economy-I + May-June 2023 Current Affairs	<ul style="list-style-type: none"> <li>National Income Accounting</li> <li>Money and Banking</li> <li>Inflation</li> <li>Employment</li> </ul>

### A National Income

- National Income
- Real National Income (RNI)
- Calculating National Income
- Gross Fixed Capital Formation (GFCF)
- Indian Organisations Related to National Income Accounts
- National Income's Trend in Growth and Structure

### B Money

- Money
- Measures of Money Supply in India
- Financial Sector
- Financial Markets
- Regulatory Framework
- Money Market and Capital Market in India
- Regulatory Framework in Indian Capital Market
- Primary Market Reforms in India
- Secondary Market Reforms in India
- Current and capital account convertibility
- Risks of financial system
- Qualified Foreign Investor (QFI)
- Stock Exchanges in India
- National Stock Exchange (NSE)
- Bombay Stock Exchange (BSE)
- MCX-SX (MCX Stock Exchange Limited)
- Over The Counter Exchange of India (OTCEI)
- Other Investment Agents

### C Banking in India

- Reserve Bank of India (RBI)
- Methods of Credit Control
- Scheduled Commercial Banks
- State Bank of India
- Private Banks
- Foreign Banks
- Regional Rural Banks
- Scheduled Co-operative Banks
- Types of Banking System
- Inter-Bank Transfer
- Banking Sector Reforms
- Basel Norms
- Banking Ombudsman
- Development Financial Institutions
- Insurance Companies

### Monetary Policy in India

- Instruments of Monetary Policy
- Monetary policy in Pre-Reform Era (1948 – 1991)
- Monetary Policy in Post-Reform Era (Since – 1991)
- Urjit Patel Committee Report
- Monetary Policy Committee and Inflation Targeting

### D Inflation

- Types of Inflation
- Causes of Inflation
- Effects of Inflation
- Measures of Inflation
- Change in Reporting of Inflation
- Measures to Check Inflation

### E Employment

- Employment and Unemployment
- Unemployment in India: Definition, Types, and Measures
- Unemployment in India: Causes and Consequences
- Jobless Growth in India: Reasons and Consequences
- Employment generation schemes in India
- Employment and Unemployment Trends in India

## Micro-topics listing of the Test Series Programme

Test ID	Subject	Syllabus
Test 03	Geography-I + July 2023 Current Affairs	<ul style="list-style-type: none"> <li>Physical Geography of the World</li> <li>Solar System &amp; the Earth</li> <li>Geomorphology</li> <li>Climatology</li> <li>Oceanography</li> <li>Biogeography</li> <li>Natural Hazards and Disasters</li> <li>Continents (Land, Climate, Resources etc.)</li> <li>Fundamentals of Human Geography</li> </ul>

### A Solar System & the Earth

- Theories of the Development of the Universe.
- Galaxy
- Star formation
- Planet Formation
- Solar system
- Moon
- Asteroid
- Meteor
- Kuiper belt
- Comets
- Dwarf Planets
- Geological History of Earth
- Evolution of the Earth- Layered Structure
  - Evolution of Lithosphere
  - Evolution of Atmosphere
  - Evolution of Hydrosphere
- Latitude and Longitude including important Parallels and Meridians
- Motions of the Earth - Rotation, Revolution, and their effects
- Inclination of the Earth's Axis and its effects
- Time Zones, Local and Standard Time and the International Date Line, Calendar
- Eclipses - Solar, Lunar
- Earth's magnetic field
- Earth's Geological time scale.
- Origin of Life.

### B Geomorphology

- Interior of the Earth
  - Crust
  - Mantle
  - Core
- Sources of Information
  - Direct
  - Indirect - Earth Quake Waves Volcanoes
- Theories: Suess Theory
- Theories: Suess Theory
- Minerals
- Major Elements of the Earth's Crust
  - Minerals - Feldspar, Quartz, Pyroxene Amphibole, Mica, Olivine
  - Physical Characteristics-Crystal Form, Cleavage Fracture, Lusture, Color, Streak
  - Transparency, Structure, Hardness, Specific Gravity
  - Metallic minerals - precious Ferrous, Non Ferrous
  - Non-metallic Minerals - Sulphur, Phosphates, Cement
- Rocks (Aggregate of Minerals)
  - Petrology
  - Rocks & landforms
  - Rocks & Soils
  - 3 Family of Rocks
  - Igneous
  - Sedimentary
  - Metamorphic
- Earth's Surface
  - Exogenic Forces
  - Endogenic Forces
  - Gradation, Degradation & Agradation
- Endogenic forces
  - Diastrophism
  - Orogenic
  - Epirogenic
  - Earthquakes
  - Plate movements
  - Volcanism
- Exogenic Forces
  - Denudation Processes
  - Weathering
  - Mass movements
  - Erosion Transportation & Deposition
- Earthquakes
  - Waves: P, S, Body, Surface, Shadow Zone
  - Types of Earthquakes
  - Effects
  - Frequency
  - Locating an Epicentre
- Volcanism
  - Types
    - Shield
    - Composite
    - Caldera
    - Flood Basalt
    - Mid Ocean Ridge
- Landforms (intrusive)
  - Batholiths
  - Lacololiths
  - Lopoliths
  - Phacololiths
  - Sills
  - Dykes
- Theories
- Continental Drift Theory
  - Alfred Wegner
  - Pangea, Panthalasa
  - Laurasia, Gondwanaland
- Evidence in support of Continental Drift Theory
  - Jigsaw Fit
  - Rocks of Same age across oceans
  - Tillite
  - Placer Deposits
  - Distribution of Fossils
- Isostacy
- Sea Floor Spreading
- Forces of Drifting
  - Pole Fleeing Force
  - Tidal Force

## Micro-topics listing of the Test Series Programme

### B Geomorphology

- Post Drift Studies
- Convectional Current Theory
- Mapping of the Ocean Floor
- Plate Tectonics
  - ✓ Lithospheric Plates - Major Plate - Minor Plates
- Plate Boundaries – Divergent – Convergent – Transform
- Rates of Plate Movements
- Force of plate movement
- Indian Plate
- Causes
  - ✓ Geomorphic Processes
  - ✓ Geomorphic Agents
- Geomorphic Agent
  - ✓ Erosional or Destruction
  - ✓ Depositional or Constructional
- Agents and their Impacts - Wind, Running Water, Ground Water, Glaciers, Waves & Currents
- Winds
  - ✓ As agents in Hot deserts
  - ✓ Cause – Deflation Abrasion Impact
  - ✓ Erosional landforms
    - ★ Pediments and Pediplains
    - ★ Playas
    - ★ Deflation Hollows and Caves
    - ★ Mushroom, Table & Pedestal Rocks
- Depositional Landforms
  - ✓ Barchans
  - ✓ Seif
  - ✓ Parabolic
  - ✓ Transverse
  - ✓ Longitudinal
- Running Water
  - ✓ Valleys
    - ★ Rills
    - ★ Gullies
    - ★ Valleys – V Shape, Gorge (Hard Rocks), Canyon (Sedimentary)
  - ✓ Potholes & Plunge pools
  - ✓ Incised or entrenched meanders
  - ✓ River Terraces – paired & unpaired
- Depositional Landforms
  - ✓ Alluvial Fans
  - ✓ Delta
  - ✓ Flood plains, Natural Levees, Point Bars
  - ✓ Meanders, Slip off bank, Under cut bank
  - ✓ Oxbow lake
  - ✓ Braided Channels
- Ground Water (Karst Topography)
  - ✓ Permeable Rocks
    - ★ Percolation
    - ★ Bedding Plains
- Limestone and Dolomite Regions
- Erosional Landforms
  - ✓ Pools - Swallow Hole, Valley Sinks (Uvalas), Sinkholes, Collapse sinks (Dolines), Lapias, Ridges, Limestone Pavements
  - ✓ Caves – Altering bed of Rocks (Shale sandstone quartzit, Caves and Tunnels)
- Depositional Landforms
  - ✓ Stalactites
  - ✓ Stalagmites
  - ✓ Pillar Columns
- Glaciers
  - ✓ Erosional Landforms
    - ★ Cirque of Tarn Lakes
    - ★ Hors and Serrated Regions – Arete
    - ★ Glacial Valleys / Troughs – Fjords
- Depositional Landforms
  - ✓ Glacial Tills
  - ✓ Moraines
  - ✓ Eskers
  - ✓ Outwash Planes
  - ✓ Drumlins
- Waves and Currents
  - ✓ High Rocky Coasts & Low Sedimentary Coasts
- Erosional Landforms
  - ★ Cliffs
  - ★ Terraces
  - ★ Caves
  - ★ Stacks
- Depositional Landforms
  - ✓ Beaches and Dunes
  - ✓ Bars, Barriers, Spits
- Weathering
  - ✓ Factors
    - ★ Geological
    - ★ Climatic
    - ★ Topographic
    - ★ Vegetative
- Major Processes
  - ✓ Chemical
  - ✓ Physical or Mechanical
  - ✓ Biological
- Chemical – Forces Chemical Action
  - ✓ Solution
  - ✓ Carbonation
  - ✓ Hydration
  - ✓ Oxidation & Reduction
- Physical Forces Gravitational, Expansion, Water Pressure
  - ✓ Unloading & Expansion
  - ✓ Temperature changes and Expansion
  - ✓ Freezing, Thawing, & Frost Wedging
  - ✓ Salt Weathering
- Biological Weathering
  - ✓ Burrowing
  - ✓ Wedging
  - ✓ Plant Roots
- Effects of Weathering
  - ✓ Exfoliation (Flakin) – Exfoliation Domes
- Significance of Weathering
  - ✓ Soil Formation
  - ✓ Biomes and Biodiversity
  - ✓ Leaching / Enrichment
- Mass Movements
  - ✓ Activating causes
  - ✓ Forms of movement – Heave Flow Slide
- Landforms across the world
  - ✓ Rivers and lakes (Factual)
  - ✓ Mountain and Peaks (Factual)
  - ✓ Plateaus (Factual)

## Micro-topics listing of the Test Series Programme

### C Oceanography

- Hydrosphere
  - ✓ Water on the Surface of the Earth
  - ✓ Hydrological Cycle
    - \* Component
    - \* Processes
- Submarine Relief Features
  - ✓ Oceans
  - ✓ Relief of the Ocean floor
  - ✓ Divisions of the ocean floor
    - \* Continental Shelf
    - \* Continental Slope
    - \* Deep sea plain
    - \* Oceanic deep and Trenches
- Minor relief features
  - ✓ Mid oceanic ridges
  - ✓ Seamount
  - ✓ Submarine canyons
  - ✓ Guyouts
  - ✓ Volcanic Islands
  - ✓ Fracture Zones
  - ✓ Hotspots
  - ✓ Coral Islands
  - ✓ Atoll
- Temperature and Salinity
  - ✓ Temperature of the Ocean Water
    - \* Vertical
    - \* Spatial
    - \* Factors affecting Temperature distribution
      - ◆ Latitude
      - ◆ Unequal distribution of land & Water
      - ◆ Prevailing wind
      - ◆ Ocean Currents
      - ◆ Horizontal & Vertical Distribution
- Salinity of the Ocean Water
  - ✓ Factors affecting salinity
    - \* Evaporation and precipitation
- Fresh water flow from rivers
  - \* Ocean currents
    - ◆ Horizontal distribution of salinity
    - ◆ Vertical Distribution of salinity
- Density of Ocean Waters
- Waves, Ocean Currents, Tides
  - ✓ Movements of ocean Water
  - ✓ Factors influencing Movement
    - \* Temperature
    - \* Salinity
    - \* Density
  - ✓ Motion – Horizontal and Vertical Currents
  - ✓ Waves
    - \* Motion of waves and water molecules
    - \* Characteristics of wave
    - \* Crest and Trough
    - \* Height
    - \* Amplitude
    - \* Period
    - \* Length
    - \* Speed
    - \* Frequency
  - ✓ Tides
    - \* Relation between Gravitational Forces and Tides
    - \* Tidal currents
    - \* Types of Tides
      - ◆ Based on Frequency – Semi Diurnal, Diurnal, mixed
      - ◆ Based on SME position – spring and Neap Tides
    - \* Importance of Tides
- Ocean Currents
  - \* Primary Force that initiates the movement
    - ◆ Heating of solar energy
    - ◆ Wind
    - ◆ Gravity
    - ◆ Coriolis force
  - \* Secondary force that influence the currents to flow
  - \* Types of ocean currents:
  - \* Surface currents & Deep water currents based on Depth
  - \* Cold and Warm Currents based on Temperature
- Major Ocean currents of the World
- Effects of Ocean Currents
- Marine Resources
  - ✓ Underground water resource
  - ✓ Surface water resources
  - ✓ Inland water resources: Utilization of inland water resources
  - ✓ Oceanic Water Resources (Marine Resource)
  - ✓ Utilization of oceans by man
  - ✓ Water consumption patterns
  - ✓ Conservation of Water Resources
  - ✓ Techniques of Water Conservation
- Ocean Deposits and Corals
  - ✓ Terrigenous Deposits
  - ✓ Volcanic Deposits
  - ✓ Biotic deposits
    - \* Neritic
    - \* Pelagic (Calcereous, Siliceous)
  - ✓ Abiotic Deposits
  - ✓ Coral Reefs
  - ✓ Great Barrier Reef

### D Climatology

- Atmosphere
  - ✓ Composition
  - ✓ Gases
  - ✓ Water Vapour
  - ✓ Dust Particles
  - ✓ Structure
  - ✓ Exosphere
  - ✓ Thermosphere
  - ✓ Mesosphere
  - ✓ Stratosphere
  - ✓ Troposphere
  - ✓ Altitude vs. Temperature
- Inversion of Temperature
  - ✓ Temperature
  - ✓ Factors controlling Temp distribution
  - ✓ Distribution of Temp Month of January-July
- Range of Temp Month of January-July
  - ✓ Inversion of Temperature
- Insolation and Heat Budget
  - ✓ Solar Radiation Heat Balance
  - ✓ Temperature Insolation
  - ✓ Aphelion and Perihelion
  - ✓ Variability of Insolation at the surface of the Earth
    - \* Day Season Year
    - \* Rotation on Axis, Angle of Inclination of the sun rays, Length of the day
    - \* Transparency of Atmosphere, configuration of land in terms of its aspect.
- Heat Balance
  - ✓ Heating and cooling of atmosphere
    - \* Conduction
    - \* Convection
    - \* Advection
  - ✓ Terrestrial Radiation
  - ✓ Heat Budget of the Planet Earth
  - ✓ Macro Budget
    - \* Albedo
    - \* Shortwave Radiation
    - \* Long wave Earth Radiation
  - ✓ Variation in the net Heat Budget at the Earth's Surface

## Micro-topics listing of the Test Series Programme

- Winds and Pressure belts
  - ✓ Atmospheric Circulation and Weather Systems
  - ✓ Atmospheric Pressure
  - ✓ Vertical variation of pressure
  - ✓ Horizontal distribution of pressure
  - ✓ World Distribution of Sea Level Pressure
  - ✓ Factors affecting the velocity and direction of the Wind
  - ✓ Pressure Gradient Force
  - ✓ Frictional Force
  - ✓ Coriolis Force
  - ✓ Pressure and Wind (Cyclonic & Anticyclone Circulation)
  - ✓ General Circulation of the Atmosphere – Pattern of Planetary Winds
  - ✓ Latitudinal Variation of Atmospheric Heating
  - ✓ Emergence of Pressure Belts
  - ✓ Migration of Belts Following apparent Path of Sun
  - ✓ Distribution of continents & Oceans
  - ✓ Rotation of the Earth
  - ✓ Circulation
  - ✓ Simplified Global Circulation – Hadley Cell, Ferrel Cell
  - ✓ Seasonal Wind
  - ✓ Local Wind
  - ✓ Land and Sea Breezes
- ✓ Mountain and Valley Winds
- Air Mass, Fronts, Cyclones and Jet Stream
  - ✓ Air mass & fronts
  - ✓ Cyclones
  - ✓ Thunderstorms
  - ✓ Tornadoes
  - ✓ Monsoons
  - ✓ Fronts
- Precipitation
  - ✓ Water in the Atmosphere
  - ✓ Water Vapour
  - ✓ Precipitation
  - ✓ Humidity – Absolute and Relative
  - ✓ Saturation – Dew Point
  - ✓ Evaporation and Condensation
  - ✓ Dew
  - ✓ Frost
  - ✓ Fog & Mist
  - ✓ Clouds
    - ★ Types – Cirrus, Cumulus, Stratus, Nimbus
    - ★ High – Cirrus, Cirrostratus, Cirrocumulus
    - ★ Middle – Altostratus, Altostratus
    - ★ Low – Stratocumulus, Nimbostratus
  - ✓ Vertical Development – Cumulus and Cumulonimbus
  - ✓ Precipitation
  - ✓ Rainfall, Snowfall, Sleet Hail,
- ✓ Hailstones
- ✓ Types of Rainfall
  - ✓ Conventional
  - ✓ Orographic
  - ✓ Cyclonic
  - ✓ World Distribution of Rainfall
- Climatic Zones of the World
  - ✓ Koppene's Classification Climatic Zones
  - ✓ World Climate
  - ✓ The Hot, Wet Equatorial Climate
  - ✓ The Tropical Monsoon and Tropical Marine Climates
  - ✓ The Savanna or Sudan Climate
  - ✓ The Hot Desert and Mid-Latitude Desert Climates
  - ✓ The Warm Temperate Western Margin (Mediterranean) Climate
  - ✓ The Temperate Continental (Steppe Climate)
  - ✓ The Warm Temperate Eastern Margin (China Type Climate)
  - ✓ The Cool Temperate Western Margin (British Type Climate)
  - ✓ The Cool Temperate Continental (Siberian) Climate
  - ✓ The Cool Temperate Eastern Margin (Lauren-tian) Climate
  - ✓ The Arctic or Polar Climate

### **E** Biogeography

- Soil Characteristics
  - ✓ Soil Characteristics
  - ✓ Factors Responsible for Soil Formation
  - ✓ Stages of Soil Formation
  - ✓ Soil Forming Processes
  - ✓ Soil Profiles and Horizons
  - ✓ Soil Classification
  - ✓ Soil Erosion and Conservation
- Vegetation resources
  - ✓ Types of natural vegetation
  - ✓ Forests
  - ✓ Significance of forests
  - ✓ Economic significance, Ecological significance
- ✓ Cultural significance
- ✓ Factors of forest development
- ✓ Extent of forest cover
- ✓ Classification of forests
- ✓ Grasslands
- ✓ Desert vegetation
- ✓ Tundra Vegetation
- ✓ Economic utilization of forests
- ✓ Deforestation
- ✓ Deforestation in tropical forests
- ✓ Deforestation in temperate forests
- ✓ Rate and extent of deforestation
- ✓ Causes and factors of deforestation: Immediate causes of deforestation
- ✓ Indirect deforestation
- ✓ Underlying causes of deforestation
- ✓ Conservation of forests
- ✓ Forest conservation strategies
- ✓ Reforestation
- ✓ Monoculture plantation
- ✓ Afforestation
- ✓ Types of forestry
- ✓ Social forestry
- ✓ Agro-forestry

### **F** Natural Hazards and Disasters

### **G** Continents (Land, Climate, Resources etc.)



## Micro-topics listing of the Test Series Programme

### H Fundamentals of Human Geography

- Demography and Census
    - ✓ Concept of human resources
    - ✓ Factors affecting the distribution of Population
      - ★ Geographical Factors
        - ◆ Availability of water
        - ◆ Landforms
        - ◆ Climate
        - ◆ Soils
      - ★ Economic Factors
        - ◆ Minerals
        - ◆ Urbanisation
        - ◆ Industrialisation
        - ◆ Socio - cultural factors
    - ✓ Population Growth
      - ★ Growth of Population
      - ★ Growth Rate of Population
      - ★ Natural growth of Population
      - ★ Positive Growth of Population
      - ★ Negative Growth of Population
    - ✓ Components of Population change
      - ★ Crude Birth Rate
      - ★ Crude Death Rate
      - ★ Migration - Place of Origin and Place of Destination
      - ★ Immigration
      - ★ Emigration
      - ★ Push Factors and Pull Factors
    - ✓ Trends in Population Growth
    - ✓ Doubling time of world population
    - ✓ Spatial pattern of Population change
    - ✓ Impact of Population Change
    - ✓ Demographic Transition
      - ★ Demographic Transition Theory
      - ★ Demographic Cycle
    - ✓ Theories of population growth
      - ★ Malthusian theory
      - ★ Marxian theory
      - ★ Demographic Transition Theory
      - ★ Optimum population
      - ★ Over-population
      - ★ Under-population
    - ✓ Population Control Measures
    - ✓ World population distribution, Density and Growth
      - ★ Continent-wide distribution of population
      - ★ Pattern of population density globally
      - ★ Population increase in the world
  - ✓ Population Composition
    - ★ Sex composition
      - ◆ Sex Ratio
      - ◆ Natural Advantage vs Social Advantage
    - ★ Age Structure
      - ◆ Age - sex Pyramid
      - ◆ Expanding Populations
      - ◆ Constant Population
      - ◆ Declining Population
    - ★ Literacy - literacy Rate
    - ★ Rural Urban Composition
    - ★ Occupational Structure
    - ★ Religion based Composition
  - ✓ Population problems
    - ★ Population problems of developing countries
    - ★ Population problems of developed countries
    - ★ Population Policies: of China, of India
  - ✓ Census 2011
    - ★ Census Terminologies
    - ★ Census of India important information
  - Human Development
    - ✓ Growth vs Development
    - ✓ The four pillars of Development
      - ★ Equity
      - ★ Sustain ability
      - ★ Productivity
      - ★ Empowerment
    - ✓ Approaches to Human Development
      - ★ Income Approach
      - ★ Welfare Approach
      - ★ Basic Needs Approach
      - ★ Capability Approach
    - ✓ International Comparisons of Human Development
  - Economic Activities
    - ✓ Primary Activities
      - ★ Hunting and Gathering
      - ★ Pastoralism
      - ★ Nomadic Herding
      - ★ Commercial livestock Rearing
      - ★ Agriculture
        - ◆ Subsistence Agriculture
        - ◆ Primitive Subsistence Agriculture
        - ◆ Intensive Subsistence Agriculture
        - ◆ Planation Agriculture
        - ◆ Extensive Commercial Grain Cultivation
        - ◆ Mixed Farming
    - ★ Dairy Farming
    - ★ Mediterranean Agriculture
    - ★ Viticulture
    - ★ Market Gardening and Horticulture - Truck Farming
    - ★ Cooperative Farming
    - ★ Collective Farming
  - ★ Mining
    - ◆ Factors affecting Mining
    - ◆ Methods of Mining - Open Cast and underground mining
- ✓ Secondary Activities
  - ★ Manufacturing
  - ★ Characteristics of Modern large scale Manufacturing
  - ★ Specialisation of Skills/ methods of Production, Mechanisation - Technological Innovation
  - ★ Access to market, Access to labour Supply, Access to Sources of Energy, Access to Transportation and communication Facilities
  - ★ Government Policy
- ✓ Classification of Manufacturing Industries
  - ★ Industries based on size
    - ◆ Small Scale manufacturing
    - ◆ Large Scale manufacturing
  - ★ Industries based on Inputs/Raw Materials
    - ◆ Agro Based industries
    - ◆ Mineral Based Industries
    - ◆ Chemical based Industries
    - ◆ Forest based Raw material using industries
    - ◆ Animal Based industries
  - ★ Industries based on Output/Product
  - ★ Industries based on ownership
- ✓ Tertiary, Quaternary and Quinary Activities
  - ★ Types of Tertiary Activities
    - ◆ Retail trading
    - ◆ Trade and commerce
    - ◆ Wholesale Trading
    - ◆ Transport
    - ◆ Communication

## Micro-topics listing of the Test Series Programme

### H Fundamentals of Human Geography

- Services
  - \* People engaged in tertiary Activities
  - Tourism
  - Medical Services
  - Quaternary Activities
  - Quinary Activities
- \* Concept of Digital Divide
- Transport and Communication
  - ✓ Transport
    - \* Modes of Transportation
    - \* Land Transport
    - \* Roads
    - \* Railways
    - \* Water Transport
    - \* Sea Routes
    - \* Inland Waterways
    - \* Air Transport
    - \* Pipelines
  - ✓ Communications
    - \* Satellite communication
    - \* Cyber space internet
- International Trade
  - ✓ History of international Trade
  - ✓ Basis of International Trade
    - \* Difference in national resources
    - \* Population Factors
    - \* Stage of Economic Development
- Settlement
  - ✓ Types and Patterns of settlements
    - \* Compact of Nucleated Settlements
    - \* Dispersed settlement
- Development
  - \* Extent of Foreign Investment
  - \* Transport
  - ✓ Important aspects of International Trade
    - \* Volume of Trade
    - \* Composition of Trade
    - \* Direction of Trade
    - \* Balance of Trade
  - ✓ Types of International Trade
  - ✓ Case of Free Trade
  - ✓ WTO – World Trade Organisation and Regional Trade Blocs
  - ✓ Gateways of International Trade
    - \* Ports
      - \* Industrial Ports
      - \* Commercial Ports
      - \* Comprehensive Ports
      - \* Inland Ports
      - \* Out Ports
      - \* Oil Ports
      - \* Port of call
      - \* Packet station
      - \* Entrepot Ports
      - \* Naval Ports
- Urban Settlements
  - ✓ Urban Settlements
    - \* Classification of Urban Settlements
    - \* Factors affecting location of rural settlements
    - \* Functions of Urban Centre
    - \* Classification of Towns on the basis of Forms
    - \* Types of Urban Settlements
      - Town, City, Conurbation, Megalopolis, Million City
  - ✓ Issues of Urbanization in India
  - ✓ Rural Urban Migration
  - ✓ Emergence of Slums
  - ✓ Inclusive Cities/Smart cities

Test ID	Subject	Syllabus
Test 04	Environment & Ecology-I + July 2023 Current Affairs	<ul style="list-style-type: none"> <li>• Ecosystem and Ecology</li> <li>• Biodiversity</li> <li>• Environmental Pollution</li> <li>• Environmental Impact Assessment</li> <li>• Conservation of environment</li> <li>• Climate Change</li> <li>• Environmental Conferences and conventions</li> <li>• Environmental Legislations</li> <li>• Environmental Organisations</li> </ul>

### A Ecology

- Ecological Hierarchy,
- Scope of Ecology,
- Habitat & Ecological Niche,
- Deep vs Shallow Ecology,
- Ecological Principles,
- Ecological Community (Structure and Characteristics of a Community, Stratification, Ecotones, Ecological Dominance, Seasonal and Diurnal Fluctuation, Periodicity, Turnover, Interdependence),
- Ecological Succession ( Types and Process of Succession, Climax Community),
- Range of Tolerance ,
- Maximum Range,
- Difference between Ecology,
- Environment and Ecosystem.

## Micro-topics listing of the Test Series Programme

### **B** Ecosystem and its functions

- Ecosystem Definitions,
- Functions and Properties of Ecosystem,
- The Structure/Components of Ecosystem (Abiotic Components, Biotic Components),
- Pollutants and Tropical Level
- Ecosystem Dynamics ( Flow of Energy in Ecosystem, Trophic Levels, Food Chain, Types & Significance of Food Chain, Food Web, Models for Energy Flow, Ecological Productivity, Ecological Pyramid),
- Biomagnifications, Biological Control, Organic Farming.
- Parts of a Bio Geochemical Cycle,
- Types of Biogeochemical Cycle (Carbon Cycle, Nitrogen Cycle, Phosphorus Cycle, Sulphur Cycle)
- Ecological Succession

### **C** Terrestrial Ecosystem

- Tundra
- Forest
- Grassland
- Mountain and
- Desert Ecosystems: Biome, Grasslands, Tundra, Deserts, Thar desert, Mountain biome.
- Desertification
- Indian State of forest report, 2021

### **F** Fauna and Flora Diversity

- Vertebrates-fish, reptiles, birds, amphibians, mammals In-vertebrates-annelids, arthropods, protozoa, arachnids, etc
- Algae, Fungi, Bacteria, Virus Bryophytes, Pteridophytes, Angiosperms, Gymnosperms.

### **D** Aquatic Ecosystem

- Aquatic ecosystems
- Lake Ecology,
- Basic facts about the ocean,
- Importance of the ocean,
- Zones of the ocean (Marine life),
- Coral reefs,
- Coral reefs in India,
- Harmful Algal bloom
- Conserving coral reefs,
- National Wetland Conservation Programme
- Mangroves,
- Freshwater in India,
- Importance of lakes,
- National Lake Conservation
- Plan,
- Wetlands and their importance,
- Ramsar Convention,
- Ramsar Sites,
- Montreux Record,
- Extent and distribution of wetlands in India,
- Conserving the wetlands of India
- Ganga Action Plan
- Namami Ganga Program
- Clean Ganga Fund
- Initiatives to Protect Coastal Environment

### **E** Basics of Biodiversity

- Biodiversity and its importance
- Levels of Biodiversity in an ecosystem
- Genetic diversity
- Species diversity
- Ecosystem/ Community diversity
- Measurement of Biodiversity
- Keystone species
- Indicator species
- Invasive species
- Allopatric and sympatric speciation
- Species richness
  - ✓ Alpha diversity
  - ✓ Beta diversity
  - ✓ Gamma diversity
- Species evenness
- Biodiversity and Food Web
- Biodiversity Hotspots
- Eco-regions
- Role of traditional knowledge in biodiversity
- Biopiracy
- Biodiversity Services
  - ✓ Ecosystem services
  - ✓ Biological services
  - ✓ Social services
- Causes for Biodiversity Loss
  - ✓ Natural
  - ✓ Man made
- Modes of Conservation
  - ✓ Ex-situ conservation
  - ✓ In-situ conservation
- Botanical Garden and Zoo
- Red Data Book
- IUCN classification of conservation priority
- UNESCO Man and the Biosphere Program (MAB)
- Characteristics of biosphere reserves
- International agreements for biodiversity conservation
- Convention on Biological Diversity
- Cartagena Protocol
- Nagoya Protocol
- Aichi Biodiversity Targets
- Important Coastal and Marine Biodiversity Areas of India
- Important Bird Areas (IBAs) of India
- Global Tiger Initiative
- Project Tiger
- Project Elephant
- Indian Rhino Vision
- Recovery Programme for Critically Endangered Species
- Use of indigenous knowledge for conserving biodiversity
- Seed village
- Level of biodiversity in India
- Biogeographic classification of India

## Micro-topics listing of the Test Series Programme

### G Environmental Pollution

#### Air Pollution

- Pollutants
- Causes of pollution
- Air Pollution (CO, CO<sub>2</sub>, CFC, Ozone, Lead, Suspended particulate matter (SPM), Sulphur dioxide (SO<sub>2</sub>), Smog and its formation)
- Indoor Air Pollution
- Fly Ash
- NAMP & NAAQ
- Air Pollution in India
- Water Pollution
- Soil Pollution
- Noise Pollution
- Radio Active Pollution
- E-Waste
- Solid Waste
- Thermal Pollution
- Plastics Pollution'
- Bio-Remediation
- Environmental Pollution and Health
- Government initiatives
- National Air Quality Monitoring Programme
- The National Air Quality Monitoring Programme (NAMP)
- National Ambient Air Quality Standards (NAAQS)
- National Air Quality Index
- Air-borne Diseases
- Toxic Substances: Toxicant, Toxicity and Toxicology
- Factors affecting toxicity

#### Water Pollution

- Types of sources: Point Sources, Diffuse or non-point source
- Water Quality Standards
- Control of Water Pollution
- Thermal Pollution
  - ✓ Sources of Thermal Pollution
  - ✓ Effects of Thermal Pollution
  - ✓ Control of Thermal Pollution
- Underground water pollution
- Marine pollution
- Effects of Water Pollution
- United Nations (UN) Water Summit on Groundwater (GW) 2022
- World Water Forum
- United Nations University's Institute for Water, Environment and Health (UNU-INWEH)

#### Soil Pollution

- Causes
- Sources
- Types
- Effects of soil pollution

#### Noise Pollution

- Ambient Noise Level Monitoring
- Impacts of noise
- Control

#### Waste Management

- Solid Waste
  - ✓ Sources of Solid Waste
  - ✓ Effect of Solid Waste
  - ✓ Control Measures of Solid Waste
  - ✓ Solid Waste Management Rules
  - ✓ Solid Waste Management-Buffer Zone
  - ✓ Hazardous Waste Management (HWM)
  - ✓ Treatment and disposal of solid waste
- E-Waste
  - ✓ E - Waste in India
  - ✓ E-waste (management) Rules 2022
- Bio Medical Waste
- Plastic Waste
  - ✓ Single use plastic (SUP)
  - ✓ Source of generation of waste plastics
  - ✓ Municipal solid waste
  - ✓ Hazardous Waste
  - ✓ Hospital waste
- Methods for Waste Management
- Effects of Poor Waste Disposal
- Landfill
- Waste Minimization Circles (WMC)

### H Environmental Impact Assessment

- The Need for EIA
- EIA Cycle and its Procedures
- Components of EIA
- Procedure of Public Hearing
- Drawbacks and Recommendations of EIA
- Environmental supplemental plan
- EIA Ruling 1984

### I Climate Change

- Global warming
- Monsoon phenomenon- El Nino, La Nina
- Green House Effect
- Global Climate Change
- Ozone layer and Ozone Hole
- Acid Rain
- Ocean acidification
- Global emissions

### J Strategies to Mitigate

- Carbon Neutrality
- Carbon sequestration,
- Carbon sink Carbon credit,
- Carbon offsetting,
- Ethical issue involved in climate change
- UNFCC
- Agenda 21
- Kigali Agreement
- Kyoto Protocol (2nd Commitment)
- International Solar Alliance
- REDD and REDD+
- IPCC
- Green climate fund
- Global environment facility
- Carbon tax Geo-engineering
- Green building
- Green rating for integrated habitat assessment (GRIHA)

### K Acts and Policies

- Convention on biological diversity (CBD)
- Ramsar convention on wetlands
- CITES
- TRAFFIC
- Convention on the conservation of migratory species (CMS)
- Coalition against wildlife trafficking (CAWT)
- Global tiger forum
- Stockholm convention
- Basel convention
- Rotterdam convention
- United Nations convention to combat desertification (UNCCD)
- International whaling commission (IWC)
- Vienna convention
- Montreal protocol
- Kyoto protocol

## Micro-topics listing of the Test Series Programme

### K Acts and Policies

- Nagoya protocol
- Cartagena protocol
- Policy on Promotion of City Compost
- Living status to Rivers
- National Hydrology Project
- Paris climate deal
- Wildlife protection act 1972
- Environmental protection act 1986,
- Eco sensitive zones
- Compensatory Afforestation Fund Act
- Draft National Wildlife Action Plan
- Draft Wetland Management Rules
- Animal welfare board
- Central zoo authority
- National biodiversity authority
- Biological diversity act 2002
- Schedule tribes and other forest dwellers act 2006
- Prevention of animal cruelty act
- National forest policy
- Coastal regulation zone
- Wetlands rule 2010
- National green tribunal

Test ID	Subject	Syllabus	
Test 05	History of India (Art and Culture and Ancient History) + August 2023 Current Affairs	<b>Culture</b> <ul style="list-style-type: none"> <li>• Architecture and Sculptures</li> <li>• Religion and Philosophy</li> <li>• Indian paintings</li> <li>• Indian Music</li> <li>• Indian Dances</li> <li>• Indian Theatres</li> <li>• Indian cinema</li> <li>• Indian Language &amp; Literature</li> <li>• Arts &amp; Crafts</li> <li>• Science and Technology</li> </ul>	<b>Ancient History</b> <ul style="list-style-type: none"> <li>• Prehistoric period</li> <li>• Harappan / Indus Valley Civilization</li> <li>• Vedic Age</li> <li>• Mahajanapadas</li> <li>• Mauryan Age &amp; Post Mauryan Age</li> <li>• Sangam Age</li> <li>• Guptas Age</li> <li>• Post Guptas Age</li> </ul>

### A Ancient History

- |  |   |   |  |
|--|---|---|--|
| <p><b>Pre-historic times</b></p> <ul style="list-style-type: none"> <li>• Periodization of Indian Pre History</li> <li>• Sources of Pre History</li> <li>• Paleolithic, Mesolithic, Neolithic - Occupation, Tools, Pottery, Settlements, Lifestyle, Prehistoric Art (Cave paintings).</li> <li>• Chalcolithic - Early towns and settlements, Farming Cultures, Pottery, Dwelling and Burial practices</li> <li>• Early Iron Age</li> <li>• Geographical Distribution and Characteristics</li> </ul> <p><b>Indus Valley Civilisation</b></p> <ul style="list-style-type: none"> <li>• Origin</li> <li>• Geographical Extent</li> <li>• Cities and towns/ Urban planning</li> <li>• Important structures</li> <li>• Agriculture, Trade and Economy</li> <li>• Polity</li> <li>• Society and Culture- Religious practices, Crafts and Pottery, Seals, Bronze and terracotta figurines</li> <li>• Decline and its causes.</li> </ul> | <p><b>Vedic Age</b></p> <p><u>Rig Vedic Period:</u></p> <ul style="list-style-type: none"> <li>• Advent of Aryans</li> <li>• Geography</li> <li>• Family and kinship</li> <li>• Society</li> <li>• Polity and administration</li> <li>• Economy</li> <li>• Religion</li> <li>• Transition to Later Vedic Age</li> </ul> <p><u>Later Vedic Age:</u></p> <ul style="list-style-type: none"> <li>• Geography</li> <li>• Social Organisation</li> <li>• Polity and administration</li> <li>• Economy</li> <li>• Religion</li> <li>• Differences between Rig Vedic and Later Vedic society</li> <li>• Philosophical systems.</li> </ul> <p><u>Mahajanapadas:</u></p> <ul style="list-style-type: none"> <li>• Republics and Monarchies</li> <li>• 16 Mahajanapadas</li> <li>• Key Dynasties</li> </ul> | <ul style="list-style-type: none"> <li>• Magadhan Empire</li> <li>• Persian Invasions</li> <li>• Alexander's Invasion</li> <li>• Society</li> <li>• Economy</li> <li>• Polity and Administration</li> <li>• Jainism: Birth and Life of Mahavira, Teachings of Mahavira, Sects of Jainism, Literature, Councils</li> <li>• Buddhism: Birth and Life of Buddha, Teachings of Buddha, Sects of Buddhism, Literature, Councils</li> <li>• Causes for the Decline</li> </ul> <p><u>Mauryan Period:</u></p> <ul style="list-style-type: none"> <li>• Foundation of the Mauryan Empire</li> <li>• Rulers and Political History of the Mauryas</li> <li>• Chandragupta, Kautilya, and Arthashastra</li> </ul> | <ul style="list-style-type: none"> <li>• Ashoka and his successors</li> <li>• Concept of Dharma</li> <li>• Edicts</li> <li>• Polity and Administration</li> <li>• Economy</li> <li>• Art, architecture, and sculpture</li> <li>• External contacts</li> <li>• Religion</li> <li>• Literature</li> <li>• Disintegration of the empire</li> </ul> <p><u>Post-Mauryan Period:</u></p> <ul style="list-style-type: none"> <li>• Sungas and Kanvas.</li> <li>• Indo-Greeks, Sakas, Kushanas, Western Kshatrapas: Contact with outside world; growth of urban centres, economy, coinage, development of religions, Mahayana, social conditions, art, architecture, culture, literature, and science.</li> <li>• Early State and</li> </ul> |
|--|---|---|--|



## Micro-topics listing of the Test Series Programme

### A Ancient History

- Society in Eastern India, Deccan, and South India
- Kharavela, The Satavahanas, Tamil States of the Sangam Age
- Administration
- Economy: land grants, Coinage, trade guilds, and urban centres
- Buddhist centres
- Sangam literature and culture
- Art and architecture.

#### Gupta Period:

- Rise of the Guptas
- Expansion and Administration

- Trade and economy
- Societal practices and status of women
- Religion
- Art and Architecture
- Developments in Science and technology.
- Decline of Guptas.
- Later Guptas

#### Post-Gupta Period:

- Harshavardhana- Polity, Economy, Social conditions, Harsha and Buddhism, Hiuen

- Tsang visit, Literature.
- Regional States during Gupta Era
- The Kadambas, Pallavas, Chalukyas of Badami
- Palas, Senas, Rashtrakutas, Paramaras
- The Chalukyas of Kalyana, Cholas, Hoysalas, Pandyas
- Polity, and administration
- Cultural aspects/Growth of art and architecture
- Religious sects
- Education
- Literature.

### B Culture

#### **Architecture in India:**

- Architectural Style of Harappan Civilisation: Various sites associated with Architecture. Their significance and location. Sculptures, figurines & seals.
- Mauryan Architecture- Ashokan Pillars, Stupas, Cave Architecture- Chaitiyas & Viharas, Sculptures.
- Post Mauryan – Features of three schools of art- Gandhara, Mathura, Amaravati.
- Rock cut caves
- Cultural development during Gupta Age
- Temple Architecture and Sculptures: Nagara and Dravida Styles, Early Temples, Rock Cut temples, Monolithic Temples, Free Standing Temples, Pallavas as great temple builders
- Medieval Period architecture: Delhi Sultanate, Regional Kingdoms ( Mandu, Jaunpur etc), Vijaynagara Architecture
- Mughal Architecture: Indo Islamic Architecture
- Provincial Styles- Bengal, Malwa, Rajputana.
- Colonial Architecture
- Sculptures in India

#### **Music in India:**

- Evolution of Indian Music
- Classical Music- Hindustani and Carnatic Forms- Their features and styles.
- Folk Music- Pandwani, Lavani, Dandiya, Wanawan, Khonjom Parwa etc.
- Regional music
- Modern music

#### **Dance and Drama in India:**

- Tracing Evolution of Dance and Drama
- Classical Dances of India, their evolution and Theme
- Well known Classical dancers of India.
- Themes in Indian folk dances
- Various texts relating to Drama
- Famous Modern Dramas and Dramatists.

#### **Theater in India:**

- Ritual theaters of different traditions.
- Entertainment theatre forms.
- Significance of Traditional folk theatre in India
- Sanskrit theatre in India
- Challenges faced by theatre in India

#### **Paintings in India:**

- Prehistoric Rock Paintings and cave paintings eg: Murals Paintings, Bagh Caves, Sittanavasal Paintings, Armamalai caves
- Pala school of miniature paintings
- Mughal miniature paintings, Role of Akbar and his successors
- Regional Paintings: Development of Rajasthani, Pahari, Kishangarh, Bundi, Kangra, Basholi, Tanjore and Deccan Paintings
- Modern Period: Bengal school of Art, Renaissance or revivalist painting
- Folk Art: Madhubani, Kalamkari, Kalighat, Warli, Pattachitra
- Theme of decorative paintings in India

#### **Puppetry in India:**

- Puppet forms in India
- Themes of puppetry in India
- Forms of Puppetry: String Puppets- Kathputli, Bommalatam, Shadow Puppets- Ravan Chayya, Togalu Gombayetta. Rod puppets- Putul Nautch, Yampuri

#### **Religious philosophies:**

- Buddhism and its impact
- Jainism and its impact
- Sufism and its impact
- Vedanta Philosophy
- Bhakti Traditions

#### **Festivals:**

- Important national festivals and fairs state-wise.
- Important tribal festivals

#### **Literature:**

- Vedic Literature
- Tamil language
- Sangam Literature
- Classical languages
- Trends in Medieval Literature
- Modern Indian Literature
- Language issue in India

#### **Miscellaneous:**

- Numismatics/coinage
- Sports in India
- Government Cultural Institutions in India
- UNESCO's List of Cultural Heritage in India
- Protection and Promotion of Indian Culture and Heritage
- Schemes and Awards
- Personalities Related to Culture
- The Calendar & the Eras

## Micro-topics listing of the Test Series Programme

Test ID	Subject	Syllabus
Test 06	Basics of Science + August 2023 Current Affairs	<ul style="list-style-type: none"> <li>Physics: Standards and units, Mechanics and properties of matter, Heat, Sound, Optics, Electricity and Magnetism, Atomic and Nuclear physics, Modern Physics, Astronomy and Space Science</li> <li>Chemistry: Matters and its nature, Chemical Reactions and Equations, Structure of the Atom, Periodic classification of elements, Chemical Bonding, Carbon and its compound, Acid, Bases and Salts, Metals and Non-metals, Thermodynamics, Nanotechnology, Agricultural Chemistry, Medicinal Chemistry, Food Chemistry, Bio Chemistry, Polymers and Plastics</li> <li>Biology: Introduction, Cell Biology, Life processes, Biocommunication, Diseases and Defence Mechanism, Nutrition, Origin and Evolution of life, Genetics, Plant Biology.</li> </ul>

### A Physics

- Standards and units
- Mechanics and properties of matter
- Heat
- Sound
- Optics
- Electricity and Magnetism
- Atomic and Nuclear physics
- Modern Physics
- Astronomy and Space Science

### B Chemistry

- Matters and its nature
- Chemical Reactions and Equations
- Structure of the Atom
- Periodic classification of elements
- Chemical Bonding
- Carbon and its compound
- Acid
- Bases and Salts
- Metals and Non-metals
- Thermodynamics
- Nanotechnology
- Agricultural Chemistry
- Medicinal Chemistry
- Food Chemistry
- Bio Chemistry
- Polymers and Plastics

### C Biology

#### Origin of Life and Cells

- Cell Structure
- Membranes
- Cell-Cell Interactions
- Energy and Metabolism
- Respiration
- Cell Division
- Sexual Reproduction

#### Genetics

- Inheritance
- DNA, The Genetic Material
- Gene Expression
- Gene Regulation
- Mutation
- Recombinant DNA Technology

#### Classification of Living Things

- Classification and Domains of Life
- General Biology/Classification of Living Things/Viruses
- Prokaryotes
- Eukaryotes
- Protista
- Plants
- Fungi
- Animals

#### Evolution of Life

- Evolution of Life
- Animal Evolution
- Human Evolution

#### Tissues

- Epithelial tissue
- Connective tissue
- Muscle tissue

#### Endocrine System

- Hypothalamus
- Pineal body (epiphysis)
- Pituitary gland (hypophysis)
- Thyroid
- Adrenal glands
- Reproductive glands

#### Respiratory System

- External and Internal Respiration
- Respiratory system in Plants
- Respiratory System in Insects
- Respiratory System in Humans and Animals

#### The Transport System in Organisms

- Transport system in a Cell
- Transport System in Plants
- Transport System in Animals
- Blood Vascular System
- The Lymphatic System

#### Skeletal and Muscular Systems

- Bone and Skeleton System (Osteology)
- Ligaments (Syndesmolgy)
- Muscular System (Myology)
- Vertebrates

#### Reproductive System

- Asexual Reproduction in Plants
- Asexual Reproduction in Animals
- Sexual Reproduction

- in Plants
- Sexual Reproduction in Animals
- Sexual Reproduction in Humans

#### Excretory System

- Excretory products
- Excretion in plants
- Excretion in Animals
- Osmoregulation, ADH and formation of Urine in Animals
- Physiological and Behavioural Adjustments

#### Nutrition

- Classification by Source of Energy and Carbon
- Plant Nutrition
- Animal Nutrition
- Human Diet
- The Digestive System
- Photosynthesis

#### Diseases

- Tuberculosis
- Non-Communicable diseases
- Diabetes mellitus

#### Economic Zoology

- Beneficial animals: Corals - Earthworm - Vermiculture
- Beneficial insects - Prawns - Lobsters - Crabs - Pearl oysters - Fishes - Guano - Aquarium - Vivarium.
- Harmful animals: Disease causing organisms - Vectors - Poisonous organisms - Fouling organisms - Pests.

## Micro-topics listing of the Test Series Programme

Test ID	Subject	Syllabus
Test 07	Indian Polity-II + September 2023 Current Affairs	<ul style="list-style-type: none"> <li>State Government (Governor, Chief Minister, State Council of Ministers, State Legislature)</li> <li>Cooperative Societies</li> <li>Official Language</li> <li>Tribunals</li> <li>Special Provisions relating to certain classes.</li> <li>Political parties, Representation of People Act, Elections, Anti Defection</li> <li>Constitutional Bodies</li> <li>Non-Constitutional Bodies</li> </ul>

### A

#### State Government

##### 1. Governor

- Appointment
- Powers and Functions

##### 2. Chief Minister

- Appointment
- Powers and Functions

##### 3. State Council of Ministers

- Constitutional Provisions
- Appointment of Ministers
- Responsibility of Ministers
- Difference between the State Council of Ministers and Cabinet Minister

##### 4. State Legislature

- Composition
- Election and duration
- Membership: Eligibility and Disqualification
- Privileges of Members
- Presiding Officer
- Legislative procedure
- Comparison between the Legislative Assembly and Legislative Council

#### TRIBUNALS:

- Administrative Tribunals
- Tribunals for other matters

#### CO-OPERATIVE

#### SOCIETIES:

- Constitutional provisions
- 97th Amendment Act

#### OFFICIAL LANGUAGE:

- Constitutional provisions
- Language of the Union
- Regional languages
- Administrative language
- Classical language

#### POLITICAL PARTIES:

- Type of political parties
- Political parties in India
- Recognition of National and State Parties
- Regional parties

#### ELECTIONS:

- The electoral system, machinery, and process.
- Representation of People Act
- Delimitation Act
- Committees related to Electoral reforms
- Anti-Defection Law

#### CONSTITUTIONAL BODIES:

##### A. Election Commission

- Constitutional provisions
- Power and functions

##### B. Union Public Service

#### Commission

- Constitutional provisions
- Power and functions

##### C. State Public Service Commission

- Constitutional provisions
- Power and functions

##### D. Finance Commission

- Constitutional provisions
- Power and functions

##### E. Goods and Services Tax Council

- Constitutional provisions
- Power and functions
- Working of the Council

##### F. National Commission for SCs

- Constitutional provisions
- Power and functions

##### G. National Commission for STs

- Constitutional provisions
- Power and functions

##### H. National Commission for BCs

- Constitutional provisions
- Power and functions

##### I. Special Officer for Linguistic Minorities

- Constitutional provisions
- Power and functions

##### J. Comptroller and Auditor General of India

- Constitutional provisions
- Power and functions

##### K. Attorney General of India

- Constitutional provisions
- Power and functions

##### L. Advocate General of the State

- Constitutional provisions
- Power and functions

#### NON-CONSTITUTIONAL BODIES:

##### 1. NITI Aayog

- Origin
- Composition
- Objectives
- Functions
- Comparison between NITI Aayog and Planning Commission

##### 2. National Human Rights Commission

- Origin
- Composition
- Objectives
- Functions

##### 3. State Human Rights Commission

- Origin

## Micro-topics listing of the Test Series Programme

A

- Composition
  - Objectives
  - Functions
- 4. Central Information Commission**
- Origin
  - Composition
  - Objectives
  - Functions
- 5. State Information Commission**
- Origin
  - Composition
  - Objectives
- Functions
- 6. Central Vigilance Commission**
- Origin
  - Composition
  - Objectives
  - Functions
  - Jurisdiction
  - Whistle Blowers Protection Act
- 7. Central Bureau of Investigation**
- Origin
  - Composition
- Objectives
  - Functions
- 8. Lokpal and Lokayuktas**
- Origin
  - Composition
  - Objectives
  - Functions
- 9. National Investigation Agency**
- Origin
  - Composition
  - Objectives
  - Functions
- Jurisdiction
- 10. National Disaster Management Authority**
- State Disaster Management Authority
  - District Disaster Management Authority

Test ID	Subject	Syllabus
Test 08	Economy-II + September 2023 Current Affairs	<ul style="list-style-type: none"> <li>• Budgeting and Fiscal Policy</li> <li>• Capital Market</li> <li>• Agriculture, Industry, Services</li> <li>• Infrastructure and Communication</li> <li>• Planning and Reforms</li> <li>• India and International Institutions</li> <li>• External Sector</li> <li>• Taxation</li> <li>• Public Finance</li> </ul>

A

### Economy

- Public Finance**
- Public Revenue
  - Types of Tax
  - Direct Tax Code (DTC)
  - Sources of Revenue
  - Debt Management Strategy
  - Finance Commission
  - Fiscal Policy
  - Fiscal Responsibility and Budget Management Act, (FRBM) 2003
  - Union Budget
  - Deficit
  - GST and its impact
- Capital Market in India**
- Regulatory Framework in Indian Capital Market
  - Secondary Market Reforms in India
  - Qualified Foreign Investor (QFI)
  - Stock Exchanges in India
- India**
- National Stock Exchange (NSE)
  - Bombay Stock Exchange (BSE)
  - MCX-SX (MCX Stock Exchange Limited)
  - Over The Counter Exchange of India (OTCEI)
  - Other Investment Agents
- Government Budgeting**
- Budget terminology
  - Types of budget
  - Features of outcome budgeting
  - Merger of Railway and General Budget
  - Benefits of budgeting
  - Flaws in budgeting process
  - Budget analysis
  - Finance Commission
  - Centre-state distribution
- Agriculture**
- Role of Agriculture in Indian Economy
  - Five Year Plan and Agriculture
  - Second Green Revolution in India
  - Evergreen Revolution
  - National Commission on Farmers
  - Agricultural Inputs
  - Food Security
  - Land resource
  - Land-use
  - Sustainable Land Management
  - Land Reforms
  - Agriculture Finance
  - Co-operative Credit Societies in India
  - Agricultural Credit Institutions
  - Self Help Group (SHG)
  - Bank Linkage Programme
- Rural Infrastructure Development Fund (RIDF)
  - Government Policy For Agricultural Credit
  - Crop Insurance in India
  - Agriculture Marketing
  - Subsidies
  - Minimum Support Price
  - Public Distribution System
  - Buffer Stock policy and government's intervention in food market to keep prices under reasonable limits to help consumers
  - Food Security bill
  - Agricultural Revolutions in India
  - Food Processing
  - Infrastructure

## Micro-topics listing of the Test Series Programme

### A Economy

- Development in Food Processing Sector
- Strategies Adopted in Budget
- New foreign and domestic investment
- Animal Husbandry, Dairying and Fisheries
- Sector-specific government policies

#### Indian Industry

- Industries in Indian Economy
- Industrial Policy
- An Evaluation of Industrial Policy Before 1991
- Companies Act, 2013
- Public Sector
- Policy of Navratnas
- Disinvestment
- The Micro, Small and Medium Enterprises (MSMEs)
- Schemes/Programmes for Small Industries
- New Economic Policy and Industrial policy under the policy of liberalization, privatization and globalization
- Phases of Industrial development
- Main features of Industrial development in India
- Strategies for disinvestment and privatization
- New Manufacturing Policy
- Industrial corridors
- SEZs
- Industrial sickness
- Effects of globalization on industries
- Sub-prime crisis and sovereign debt crisis

- on Industry in India
- Industrial Finance in India
- Make in India achievements

#### Services Sector

- Current Scenario
- Composition of Service Sector
- Services Sectors of India
- Some Major Services of India
- Challenges of Service Sector

#### Infrastructure

- Definition of Infrastructure
- Infrastructure in 12th Plan
- Transport System in India
- Importance and development of transport
  - Means of transport
  - Transport costs and economic distance
  - Operating costs in transport
  - Relative importance of means of transport: Railways, Roads, Pipeline, Oceans, Air transport
  - Profits and freight rates
  - Government's transport policy
  - Transport patterns in the world
  - Transport costs and specialization
  - Transport and

- trade in the modern era
- ✓ Negative externalities of transport
- Major Schemes

#### Planning in India

- Meaning of Economic Planning
- Strategies of Planning
- History of Planning in India
- National Institution for Transforming India (NITI) Aayog
- Planning Commission
- National Development Council (NDC)
- Five Year Plans in India
- Twelfth Five Year Plan (2012-2017)
- Three Year Action Agenda (2017-18 to 2019-20)
- India Vision 2020

#### International Financial and Economic Organisation

- International Monetary Fund (IMF)
  - IMF Quota
  - Special Drawing Rights (SDRs)
  - IMF Reforms
- World Bank Groups
- The United Nations Conference on Trade and Development (UNCTAD)
- World Trade Organisation (WTO)
- Organisation of Petroleum Exporting Countries (OPEC)
- Organisation for Economic Co-operation and

- Development (OECD)
- Eurasian Economic Union (EEU)
- AIIB and NDB
- Regional Financial Institutions

#### External Sector

- Types of debt
- BEPS (Base Erosion and Profit Shifting)
- Double Tax Avoidance Treaty
- Advance Pricing Agreement
- E-tourist Visa
- India's Asylum Policy
- Investor-State Dispute Settlement (ISDS)

#### India's Balance of Payments

- Balance of Payments (BoP)
- Foreign Capital
- Foreign Exchange-NEER & REER, ETF
- Capital Account Convertibility in India
- India's External Debt
- NRI Deposits
- FERA & FEMA
- NRI Deposits
- Trade Composition
- Policy and Agreements

#### India's Foreign Trade

- Foreign Trade Policy
- India's Trading
- Trade Composition
- Import Cover
- Export Promotion
- General Agreement on Tariffs and Trade



## Micro-topics listing of the Test Series Programme

Test ID	Subject	Syllabus	
Test 09	Geography-II + October 2023 Current Affairs	<u>Physical Geography of India:</u> <ul style="list-style-type: none"> <li>Location, Area and Boundaries</li> <li>Structure and Relief: Physiographic Divisions</li> <li>Drainage System Weather, Climate and Seasons</li> <li>Soils</li> <li>Natural Vegetation, Plant and Animal Life</li> </ul>	<u>Economic and Human Geography - India:</u> <ul style="list-style-type: none"> <li>Agriculture</li> <li>Land Resources</li> <li>Water Resources</li> <li>Mineral and Energy Resources</li> <li>Industries</li> <li>Transport and Communication</li> <li>Population, Migration</li> <li>Settlements</li> </ul>

### A Geography

#### Physiography of India

- Geological Region
- Location
- Physiographic Sub-Units
  - ✓ Himalayans
  - ✓ Northern Plains
  - ✓ Peninsular Plateau
  - ✓ Thar Desert
  - ✓ Coastal Plain
  - ✓ The Islands
- Mountain System
  - ✓ Classification of The Himalayan System
  - ✓ Regional Division of the Himalaya
- The Peninsular - Peninsular Plateaus
- Plains - Northern Plains of India
- Lakes
- Deserts
- Indian Coasts and Islands

#### Drainage System

- Classification of Drainage
- Himalayan Drainage
- Indus river system
- Indus drainage system
- Ganga River System
- Brahmaputra river system
- Peninsular River System
- East flowing Rivers
- West flowing Rivers
- Mains Rivers and their tributaries
- Famous cities and river banks

#### Climate

- Factors influencing the climate of India
- Monsoon
- Mechanism of the Monsoon
  - ✓ Classical Theory
  - ✓ Modern theory
  - ✓ Air mass theory
  - ✓ Jet stream theory
- EL NINO and LA NINA
- Seasonal rhythm
- Koppen's Climatic classification
- Indian Droughts and Floods

#### Soils in India

- Soil Acidity
- Soil textures
- Minerals of Soil
- Soil Erosion
- Soil Conservation

#### Natural Vegetation

- Vegetation
- Mangroves
- Distribution of Forest Area
- Forest Problems in India

#### Population

- Size, growth rate and distribution of population
- India in World Population
- Demographic transition
- Census in India
- Ranking of States and Union
- Territories by population: 2001 &

#### 2011

- Population Growth Rates
- Population: States and UT
- Decadal growth rate
- National Population Policy
- Density of population
- Literacy
- Literacy in major states
- Literacy rate in India: 1951-2011
- Ranking of States and UTs by 206 literacy rate: 2011
- Gender composition of the Population
- Trends in Sex Ratio in India
- Child sex ratio in age group 0-6 yrs
- Sex ratio of age 7 years and above population
- Old Age People
- Health Indicators

#### Settlements and Urbanization

- Rural Settlements
- Factors affecting settlement patterns
- Settlement types
- Urbanization
- Urban Agglomeration / Cities

#### Land Resource

- Land-use
- Land capability classification
- Causes of Land Degradation
- Impact of Land

#### Degradation

- Steps taken by GOI
- Sustainable Land Management

#### Mineral Resource

- Types of minerals: Metallic minerals
- Non-metallic mineral
- Distribution of minerals and mining regions
- Distribution, production and international trade of Metallic minerals: Ferrous metals: Iron ore
- Ferro-alloys and non-ferrous
- Manganese
- Chromium
- Nickel
- Tungsten
- Antimony
- Copper
- Bauxite and Aluminium
- Zinc; Lead
- Tin
- Gold
- Silver
- Platinum
- Mineral chemicals
- Mica
- Potash
- Phosphate
- Nitrates
- Sulphur
- Conservation of mineral resources

#### Energy Resources

- Classification of energy
- Production of

## Micro-topics listing of the Test Series Programme

### A Geography

- conventional energy
  - General trends of energy production and consumption
  - Reserves and sources of energy
  - Coal
  - Nature and origin of coal
  - Constituents and kinds of coal
  - Coal fields and coal production
  - Byproducts of coal
  - Conservation of Coal
  - Petroleum
  - Nature and properties of petroleum
  - Origin and recovery
  - Exploration
  - Petroleum refining
  - Petroleum reserves
  - Producing areas
  - Consumption of petroleum
  - International trade
  - OPEC and its role in oil trade
  - Natural gas: Reserves and Production
  - Hydro-electricity
  - Advantages of hydro-electricity
  - Ideal conditions for generation of hydro-electricity
  - Distribution of potential hydro-power
  - Hydro-electric power generation in India
  - Atomic (nuclear) energy
  - Atomic: source minerals: Uranium
  - World distribution of Uranium
  - Production of Uranium
  - Thorium
  - Production of Atomic (Nuclear) Energy
  - Nuclear Energy
  - Alternative (non-conventional) sources of energy
  - Solar energy
  - Wind energy
  - Geothermal power
  - Tidal energy
  - Wave energy
  - Biomass energy
- Agriculture Basic Terminologies**
- Performance of the agriculture sector
  - Types of farming in India
  - Dry zone farming
  - Organic farming
  - Cropping seasons in India
  - Cropping Pattern in India
  - Agriculture regionalization
  - Infrastructure factors: Seeds; Fertilizers; Irrigation
  - Land use pattern in India
  - Institutional Factors as land reform
  - Horticulture sector in India
  - Agricultural revolutions
  - Agricultural labours
  - Price Policy for Agriculture
  - Agricultural marketing
  - Agricultural Insurance
  - Agricultural Census
  - Major schemes in agricultural sector
  - National Policy for farmers
  - Impact of climate change on agriculture
  - What is sustainable agriculture?
  - Use of IT in agriculture
  - Agriculture Issues and Challenges
- Recent Developments in Agriculture Field**
- NITI Aayog proposed the idea of taxation of agricultural income
  - Removing agricultural commodities from the essential commodities Act: NITI Aayog
  - Feminization of Agriculture
  - e-auction portal : e-Rakam for selling agricultural produce
  - "AGRI-UDAAN" – Food and agri-business acceleration 2.0 to bring startup revolution
  - APEDA (Agricultural and Processed Food Products Export Development Authority Act)
  - SMAM (Sub-Mission on Agricultural Mechanization)
  - Jute-ICARE Project
  - Project CHAMAN
  - Doubling the farmers income: Ashok Dalwai Committee
  - RKVY-RAFTAAR
  - Agro Irradiation Centers
  - Agricultural Marketing and Farm Friendly Reforms Index
  - National Food Security Act
  - Digitization and Agriculture
  - Direct Benefit Transfer in Fertilizer Sector
  - Draft Regulation on Fortification of Foods
  - Law Commission Recommendation on Food Laws
  - Concept of Modern Terminal Markets
  - Animal Husbandry, Dairying and Fisheries
  - e-Pashuhaat Portal
  - Schemes of Bio-Tech Kisan and Cattle Genomics
  - RashtriyaGokul Mission
  - Mission Fingerling
  - Ornamental Fishing
  - Agricultural Science Congress
  - RubSiS
  - Ethanol Blending
  - National Bureau of Plant Genetic Resources
  - Amendments to the NABARD Act, 1981
  - Revenue Insurance Scheme for Plantation Crops
  - Neem Coating of Urea
  - National Agriculture Market
- Productivity of Crops and conditions for growth**
- Wheat
    - ✓ Conditions of growth
    - ✓ Varieties
    - ✓ Types of cultivation
    - ✓ Production pattern
    - ✓ International trade
  - Rice
    - ✓ Conditions of growth
    - ✓ Varieties
    - ✓ Types of cultivation
    - ✓ Production pattern
    - ✓ International trade
  - Maize (Corn)
    - ✓ Conditions of growth
    - ✓ Production pattern
    - ✓ International trade
  - Barley
    - ✓ Conditions of growth
    - ✓ Production pattern
    - ✓ International trade
  - Oats
  - Rye
  - Beverages
  - Tea
    - ✓ Condition of growth
    - ✓ Production pattern
    - ✓ International trade
  - Coffee
    - ✓ Types of coffee
    - ✓ Conditions of growth
    - ✓ Production

## Micro-topics listing of the Test Series Programme

### A Geography

- ✓ pattern
  - ✓ International trade
  - Cocoa
    - ✓ Conditions of growth
    - ✓ Production pattern
    - ✓ International trade
  - Tobacco
    - ✓ Conditions of growth
    - ✓ Production pattern
    - ✓ International trade
  - Fibre Crops
  - Cotton
    - ✓ Varieties of cotton
    - ✓ Conditions of growth
    - ✓ Production pattern
    - ✓ International trade
  - Jute
    - ✓ Conditions of growth
    - ✓ Production pattern
    - ✓ International trade
  - Substitutes of Jute: Flax, Hemp
    - ✓ Raw Silk
    - ✓ Production pattern
  - States
  - Natural Rubber
    - ✓ Other sources of rubber
    - ✓ Plantations in South-east Asia
    - ✓ Production pattern
  - Sugarcane
    - ✓ Conditions of growth
    - ✓ Production pattern
    - ✓ International trade
    - ✓ Sugarbeet – Conditions of growth
    - ✓ Production pattern
    - ✓ Sugar industry
  - ✓ Sugar consumption
  - ✓ International trade.
- Industry**
- Industrial development
  - Iron and Steel Industry
  - Location of iron and steel industry
  - Development of iron manufacture
  - Distribution of iron and steel industry
  - Global steel production
  - International trade in Steel
  - Textile Industry
  - Cotton Textile Industry: Location of the industry
  - Recent trends in localization
  - Distribution and production of cotton textiles
  - Woollen textile industry: Location of the industry
  - Silk textile industry: Raw silk manufacture
  - Silk textile manufacturing
  - Synthetic (artificial) silk industry
  - Distribution of man-made fibre and fabrics
  - Engineering Industries
  - Machine tools and machines: Areas of production
  - Industrial machinery: Textile machinery
  - Agricultural machinery
  - Manufacturing of transport equipment
  - Automobile industry
  - Shipbuilding
  - Aircrafts Industry
  - Fertilizer industry: Nitrogen fertilizers
  - Phosphate fertilizers
  - Potash fertilizers
  - Agro-industries
- Synthetic rubber industry
  - Pulp and paper industry: Essential conditions for pulp production
  - Production of paper and paper board
  - Newsprint
  - Cement industry
  - Distribution of cement industry
  - Recent trends: Main global competitors
  - Petroleum refining industry: Localization
  - Site selection of petroleum refineries
  - History of oil refineries
  - World pattern of oil refining
  - Petroleum products
  - Industrial Regions
  - Characteristics of industrial regions
  - Delimitation of an industrial region
  - Principal industrial regions of the world
  - Industrial regions of Anglo America—USA, Canada, Western Europe and Central Britain, Germany, Belgium, Netherlands, France, Italy, Eastern Europe, Poland, Former USSR
  - Eastern Asia—Japan, China, the 'Dragons', India, High tech patterns.
- Transport**
- Importance and development of transport
  - Means of transport
  - Transport costs and economic distance
  - Operating costs in transport
  - Relative importance of means of transport: Railways, Roads, Pipeline, Oceans, Air transport
  - Profits and freight rates
- Government's transport policy
  - Ocean transport routes
  - Inland waterways
  - Main regions of inland waterways
  - Railways: Factors affecting the railroads
  - Distribution of railroads in the world
  - Air transport: Factors influencing air transport
  - Air transport in various continents
  - Pipeline transport
  - Petroleum (oil) pipelines
  - Gas pipelines
- Recent Development in Transport Sector**
- Rural electrification corporation: First green bond
  - Time and costs over runs of infrastructure projects
  - India's First Mega Coastal Economic Zone (CEZ) to come up in Maharashtra
  - Logistic sector gets infrastructure status
  - AIIB approves \$150 million for India infrastructure fund
  - Ro-Ro Ferry service
  - Bharatmala project for construction of 24,000 km of highway connecting Western and Eastern part
  - Union Ministry of shipping is planning to expand Logistics Data Bank (LDB)
  - Railways India Development Fund
  - National Infrastructure Investment Fund
  - Defence Innovation Fund
  - Flexi Fare Method in Railway
  - Rail Cadre

## Micro-topics listing of the Test Series Programme

### A Geography

- |   |   |  |   |
|---|---|--|---|
| <ul style="list-style-type: none"> <li>• Management</li> <li>• TRI-NETRA in Railways</li> <li>• National Rail Plan 2030</li> <li>• India's First Caterpillar Train</li> <li>• Green corridor concept</li> <li>• Made in India 'Medha' train</li> <li>• Antyodaya Express</li> <li>• Smart Railway Station</li> <li>• Yatri Mitra Seva</li> <li>• National Highways Interconnectivity</li> <li>• Vehicle Fleet Modernization Programme</li> <li>• Transit Oriented Development Policy</li> </ul> | <ul style="list-style-type: none"> <li>• Logistic Efficiency Enhancement Programme</li> <li>• Indian Bridge Management System</li> <li>• National Road Safety Policy</li> <li>• TARANG</li> <li>• E-trans</li> <li>• DEEP (Discovery of Efficient Electricity Pric</li> <li>• GARV II APP</li> <li>• Trading of Energy Saving Certificates</li> <li>• Powers for all 24x7</li> <li>• Draft National Electricity Plan</li> <li>• Habitat Commitment Index</li> </ul> | <p><b>Recent developments in Industrial Sector</b></p> <ul style="list-style-type: none"> <li>• Disinvestment of PSUs</li> <li>• Report titled "India's Labor Market: A New Emphasis on Gainful Employment</li> <li>• Wage code Bill in line of recommendations of 2nd National Commission on Labor</li> <li>• CAR for the operation of Drones in India.</li> <li>• Draft Evaluation template for the star rating of Minor Minerals</li> <li>• Online database containing GIS-Enabled portal Maps</li> </ul> | <p>land related information</p> <ul style="list-style-type: none"> <li>• Chennai-Bangalore Industrial Corridor</li> <li>• Apex Corridor Developmental Authority</li> <li>• Tamra Portal</li> <li>• Mining Surveillance System</li> <li>• Coal Mitra</li> <li>• M-SIPS for Electronic Sector</li> <li>• Indian Enterprise Development Service</li> <li>• Trade Receivables Discounting System</li> <li>• SME Business Environment Index</li> </ul> |
|---|---|--|---|

Test ID	Subject	Syllabus
Test 10	Environment & Ecology-II + October 2023 Current Affairs	<ul style="list-style-type: none"> <li>• Climate Change</li> <li>• Environmental Conferences and conventions</li> <li>• Environmental Legislations</li> <li>• Environmental Organizations</li> <li>• Wildlife Sanctuaries, National Parks and Biosphere Reserves</li> </ul>

### A Climate change

- Melting of glaciers
- Global warming
- National action plan
- Carbon sequestration
- Carbon sink
- Monsoon phenomenon- El Nino, La Nina
- Green House Effect
- Global Climate Change
- Ozone layer and Ozone Hole
- Acid Rain
- Ocean acidification
- Global emissions

### B Environmental Conferences and Conventions

- |   |   |   |
|---|---|---|
| <ul style="list-style-type: none"> <li>• CBD</li> <li>• UNFCC</li> <li>• Agenda 21</li> <li>• Kigali Agreement</li> <li>• Kyoto Protocol (2nd Commitment)</li> <li>• REDD and REDD+</li> <li>• IPCC</li> <li>• Green climate fund</li> <li>• Global environment facility</li> <li>• Ramsar convention on wetlands</li> <li>• CITES</li> </ul> | <ul style="list-style-type: none"> <li>• TRAFFIC</li> <li>• Convention on the conservation of migratory species (CMS)</li> <li>• Coalition against wildlife trafficking (CAWT)</li> <li>• Global tiger forum</li> <li>• Stockholm convention</li> <li>• Basel convention</li> <li>• Rotterdam convention</li> </ul> | <ul style="list-style-type: none"> <li>• United Nations convention to combat desertification (UNCCD)</li> <li>• International whaling commission (IWC)</li> <li>• Vienna convention</li> <li>• Montreal protocol</li> <li>• Kyoto protocol</li> <li>• Nagoya protocol</li> <li>• Cartagena protocol</li> <li>• Paris Climate Deal</li> <li>• IPCC</li> <li>• COP</li> </ul> |
|---|---|---|

### C Environmental legislations

- |   |   |  |
|---|---|--|
| <ul style="list-style-type: none"> <li>• Environmental Protection Act 1986</li> <li>• Wildlife Protection Act 1972</li> <li>• Biodiversity Act 2002</li> <li>• Eco sensitive zones</li> <li>• Compensatory Afforestation</li> </ul> | <ul style="list-style-type: none"> <li>• Fund Act</li> <li>• Draft National Wildlife Action Plan</li> <li>• Draft Wetland Management Rules</li> <li>• Schedule tribes and other forest</li> </ul> | <ul style="list-style-type: none"> <li>• dwellers act 2006</li> <li>• Prevention of animal cruelty act</li> <li>• National forest policy</li> <li>• Coastal regulation zone</li> <li>• Wetlands rule 2010</li> </ul> |
|---|---|--|

## Micro-topics listing of the Test Series Programme

### D Environmental Organizations

- UNFCCC
- IUCN
- CITES
- Animal Welfare Board
- National Ganga River Basin Authority
- International Solar Alliance
- International whaling commission (IWC)
- Animal welfare board
- Central zoo authority
- National biodiversity authority
- National green tribunal

**Wildlife Sanctuaries**  
**National Parks**  
**Biosphere Reserves**

Test ID	Subject	Syllabus
Test 11	History of India (Medieval India and Modern India) + November 2023 Current Affairs	<p><b>Medieval India:</b></p> <ul style="list-style-type: none"> <li>• Early Medieval Period</li> <li>• North India &amp; South India</li> <li>• Sultanate Period</li> <li>• The Delhi Sultanate</li> <li>• Vijayanagar &amp; other Kingdoms</li> <li>• Religious Movements</li> <li>• Bhakti Movement, Sufi Movement</li> <li>• Mughal Period</li> <li>• Maratha Confederacy</li> </ul> <p><b>Modern India:</b></p> <ul style="list-style-type: none"> <li>• India in the late Eighteenth Century</li> <li>• The Advent of the Europeans and British Conquest of India</li> <li>• The British Administrative Structure, Reform, Impact and Organization of Government of India</li> <li>• Social - Religious Movements in 19th - 20th centuries</li> <li>• Freedom Struggle: The Revolt of 1857 &amp; change after 1857</li> <li>• Moderate Phase(1885 - 1905), Reforms /Acts / Committee, Congress, Session, Governor -General Viceroys, Policies</li> <li>• Tribal &amp; Peasant Movements etc.</li> <li>• Freedom Struggle: Extremist Phase (1905-17): Emergence of Extremist &amp; Leaders, The Partition of Bengal, Morley-Minto Reforms, Swadeshi Movement, Home Rule</li> <li>• Freedom Struggle: The Gandhian Era (1917-47): Gandhi - Advent and Achievement, Rowlatt Act, Jallianawala Bagh Massacre and Khilafat Movement, Non-Cooperation, Civil Disobedience and Quit India Movement, British Response and Negotiations, INA</li> </ul>

### A Medieval India

#### Early Medieval India, 750-1200

- Polity: Major political developments in Northern India and the peninsula, origin, and the rise of Rajputs.
- The Cholas: administration, village economy and society "Indian Feudalism".
- Agrarian economy and urban settlements.
- Trade and commerce.
- Society: the status of the Brahman and the new social order.
- Condition of women.
- Indian science and technology.



## Micro-topics listing of the Test Series Programme

### A Medieval India

#### Cultural Traditions in India, 750-1200

- Philosophy: Skankaracharya and Vedanta, Ramanuja and Vishishtadvaita, Madhva and Brahma Mimansa.
- Religion: Forms and features of religion, Tamil devotional cult, growth of Bhakti, Islam and its arrival in India, Sufism.
- Literature: Literature in Sanskrit, growth of Tamil literature, literature in the newly developing languages, Kalhan's Rajtarangini, Alberuni's India.
- Art and Architecture: Temple architecture, sculpture, painting.

#### The Thirteenth Century

- Establishment of the Delhi Sultanate: The Ghurian invasions - factors behind Ghurian success.
- Economic, Social and cultural consequences.
- Foundation of Delhi Sultanate and early Turkish Sultans.
- Consolidation: The rule of Iltutmish and Balban.

#### The Fourteenth Century

- The Khalji Revolution.
- Alauddin Khalji: Conquests and territorial expansion, agrarian and economic measure.
- Muhammad Tughluq: Major projects, agrarian measures, bureaucracy of Muhammad Tughluq.
- Firuz Tughluq: Agrarian measures, achievements in civil engineering and public works, decline of the Sultanate, foreign contacts and Ibn Battuta's account.
- Nature of the State, Administration of Delhi Sultanate, State Departments and various posts, Military reforms.
- Society: composition of rural society, ruling classes, town dwellers, women, religious classes, caste and slavery under the Sultanate, Bhakti movement, Sufi movement.
- Culture: Persian literature, literature in the regional languages of North India, literature in the languages of South India, Sultanate

architecture and new structural forms, painting, evolution of a composite culture.

- Religion and customs under the Sultanate, Scientific advancements.
- Economy: Agricultural Production, rise of urban economy and non-agricultural production, trade, and commerce.
- Land revenue and taxation, local and village administration, Cities and towns. Trade and crafts, Agriculture, export & imports.

#### The Fifteenth and Early Sixteenth Century

##### Political Developments and Economy:

- Rise of Provincial Dynasties: Bengal, Kashmir (Zainul Abedin), Gujarat, Malwa, Bahmanids.
- Bahmini Kingdom- Polity & Internal Conflicts, Administration and Economy, Conflict with Vijayanagara- Battle of Talikotta, Rise of Deccani culture, Architecture of Bahminis, Disintegration of Bahminis.
- The Vijayanagara Empire: Rise of Vijayanagara State, Harihara and Bukkaraya, Political Organisation - Nayaka System, Social life and Economy, Krishna Devaraya- administration and foreign policy, Literary works, Architecture of Vijayanagara- Structures of Hampi.
- Visit of Foreign travellers.
- Lodis. — Mughal Empire, First phase: Babur, Humayun.
- The Sur Empire: Sher Shah's administration.
- Portuguese colonial enterprise, Bhakti, and Sufi Movements.

##### Society and culture:

- Regional cultures specificities.
- Literary traditions.
- Provincial architecture.
- Society, culture, literature, and the arts in Vijayanagara Empire.

#### Akbar

- Conquests and consolidation of empire.
- Establishment of jagir and mansab systems.
- Rajput policy.

- Evolution of religious and social outlook. Theory of Sulh-i-kul and religious policy.
- Court patronage of art and technology.

#### Mughal Empire in the Seventeenth Century

- Major administrative policies of Jahangir, Shahjahan, and Aurangzeb.
- The Empire and the Zamindars.
- Religious policies of Jahangir, Shahjahan, and Aurangzeb.
- Nature of the Mughal State.
- Late Seventeenth-Century crisis and the revolts.
- The Ahom kingdom.
- Shivaji and the early Maratha Kingdom

#### Economy, Society and Culture during Mughal Period

- Population Agricultural and craft production.
- Towns, commerce with Europe through Dutch, English and French companies: a trade revolution.
- Indian mercantile classes. Banking, insurance, and credit systems.
- Conditions of peasants, Condition of Women.
- Evolution of the Sikh community and the Khalsa Panth.
- Persian histories and other literature.
- Hindi and religious literatures.
- Mughal architecture.
- Mughal painting.
- Provincial architecture and painting.
- Classical music.
- Science and technology

#### The Eighteenth Century

- Factors for the decline of the Mughal Empire.
- The regional principalities: Nizam's Deccan, Bengal, Awadh.
- Maratha ascendancy under the Peshwas.
- The Maratha fiscal and financial system.
- Emergence of Afghan power Battle of Panipat, 1761.
- State of, political, cultural, and economic, on eve of the British conquest.

## Micro-topics listing of the Test Series Programme

### B Modern India

#### European Penetration into India

- The Early European Settlements
- The Portuguese and the Dutch
- The English and the French East India Companies and their struggle for supremacy
- Carnatic Wars
- Bengal-The conflict between the English and the Nawabs of Bengal; Siraj and the English;
- The Battle of Plassey; Significance of Plassey
- Bengal-Mir Jafar and Mir Kasim
- The Battle of Buxar
- Rise of Regional Kingdoms- Bengal, Hyderabad, Awadh, Mysore
- The Marathas and the three Anglo Maratha Wars
- Punjab.
- Jats and Rajputs

#### Early Structure of the British Raj

- The Early administrative structure from diarchy to direct control
- The Regulating Act (1773)
- The Pitt's India Act (1784)
- The Charter Act (1833)
- The Voice of free trade and the changing character of British colonial rule
- The English utilitarian and India
- Innovative Administrative policies - Ringfence, subsidiary alliance and doctrine of lapse
- Civil Service in India
- Role of Army
- Police
- Judicial organization during British Rule

#### Economic Impact of British Colonial Rule

- Land revenue settlements in British India: The Permanent Settlement; Ryotwari Settlement; Mahalwari Settlement
- Economic impact of the revenue arrangements: Commercialization of agriculture; Rise of landless agrarian labourers; Impoverishment of the rural society
- Dislocation of traditional trade and commerce: De-industrialisation; Decline of traditional crafts; Drain of wealth
- Economic transformation of India: Railroad and

communication network including telegraph and postal services; Famine and poverty in the rural interior; European business enterprise and its limitations.

#### Social and Cultural Developments

- The state of indigenous education, its dislocation
- Orientalist-Anglicist controversy
- The introduction of western education in India
- The rise of press, literature, and public opinion
- The rise of modern vernacular literature
- Progress of science
- Christian missionary activities in India

#### Social and Religious Reform Movements in Bengal and Other Areas:

- Ram Mohan Roy, The Brahmo Movement
- Devendranath Tagore
- Iswarchandra Vidyasagar
- The Young Bengal Movement
- Dayanada Saraswati
- The social reform movements in India including Sati, widow remarriage, child marriage, etc.
- The contribution of Indian renaissance to the growth of modern India
- Islamic revivalism- the Feraizi and Wahabi Movements.
- Parsi reforms
- Sikh reforms

#### Indian Response to British Rule

- Peasant movement and tribal uprisings in the 18th and 19th centuries including the Rangpur Dhing (1783), the Kol Rebellion (1832), the Mopla Rebellion in Malabar (1841-1920), the Santal Hul (1855), Indigo Rebellion (1859-60), Deccan Uprising (1875) and the Munda Ulgulan (1899-1900)
- The Great Revolt of 1857 –Origin, character, causes of failure, the consequences
- The shift in the character of peasant uprisings in the post-1857 period
- The peasant movements of the 1920s and 1930s.

#### Modern Nationalism (till 1918)

- The Foundation of the Indian National Congress
- The Safety-valve thesis relating to the birth of the Congress
- Programme and objectives of Early Congress
- The social composition of early Congress leadership
- The Moderates and Extremists
- The Partition of Bengal (1905)
- The Swadeshi Movement in Bengal: the economic and political aspects of Swadeshi Movement
- Surat Split
- The beginning of revolutionary extremism in India- Bengal, Maharastra, Punjab and Abroad, Important leaders and activities
- Minto - Morley reforms
- World War I and response
- Home Rule Movement
- Lucknow Pact
- Russian Revolution and impact
- Montague Chelmsford Reforms

#### Gandhian Phase

- Rise of Gandhi
- Character of Gandhian nationalism
- Gandhi's popular appeal
- Champaran Satyagraha, Ahmedabad Mill strike, Kheda Satyagraha
- Rowlatt Satyagraha
- Jallianwala Bagh Massacre
- Khilafat Movement
- Non-cooperation Movement
- Impact of Chauri Chaura Incident
- National politics from the end of the Non-cooperation movement to the beginning of the Civil Disobedience Movement.
- The two phases of the Civil Disobedience Movement
- Swarajists and No-changers
- Emergence of socialist, Marxist ideas
- State peoples conference movements
- Rise of Socialism within congress
- Peasant, Tribal and workers agitation
- Revolutionary Activity- II
- Response of British to revolutionary terrorism
- Simon Commission
- The Nehru Report
- The Round Table Conferences
- The election of 1937 and the formation of ministries

## Micro-topics listing of the Test Series Programme

### B Modern India

- Cripps Mission
- August Offer, 1940
- Individual civil disobedience movement (1940-41)
- The Quit India Movement
- Azad Hind Fauj and SC Bose
- INA Trials
- Wavell Plan and Shimla Conference
- 1945-46 elections and the communal divide
- RIN (Royal Indian Navy Mutiny)
- Cabinet Mission
- Indian independence Act July, 1947
- Nationalism and the Peasant Movements
- Nationalism and Working-class movements
- Women and Indian youth and students in Indian politics (1885-1947)
- Jawaharlal Nehru, Subhas Chandra Bose, the Congress Socialist Party; the Communist Party of India, other left parties.
- Politics of Separatism: the Muslim League; the Hindu Mahasabha; Communalism and the politics of partition.
- National Movement in Princely States
- Factors leading to partition.
- Communal Riots
- Radcliff Commission

#### Other strands in the National Movement

- The Revolutionaries: Bengal, the Punjab, Maharashtra, U.P. the Madras Presidency, Outside India.
- The Left within the Congress:

Test ID	Subject	Syllabus
Test 12	Science and Technology + November 2023 Current Affairs	<ul style="list-style-type: none"> <li>• Space technology - Special focus on ISRO</li> <li>• Defense</li> <li>• Biotechnology</li> <li>• Emerging trends in Health, and disease</li> <li>• Nuclear technology</li> <li>• ICT</li> <li>• Intellectual Property Rights</li> <li>• Energy</li> <li>• Nanotechnology</li> </ul>

### A Space

- Satellite Communication in India
- INSAT Satellite Applications
- Remote Sensing Applications
- Cryogenic Rockets
- Global Positioning System
- Role of Space in Development
- ISRO as Soft Power
- Issue of Space Race
- Space Activities Bill, 2017
- Outer space treaty
- Space Research Programme, Orbits and Launch
  - ✓ Space Technology
  - ✓ Indian Space research Programme
  - ✓ ISRO and ANTRIX
- ✓ Orbits Type
- ✓ Satellite Launching Systems
- ✓ Terminologies Related to the Space Science
- Satellites, Launch Vehicles and India Satellite Programmes
  - ✓ Earth Observation Systems
  - ✓ Satellite Communication in India
  - ✓ Remote sensing applications - IRS Systems
  - ✓ INSAT Satellite Application
  - ✓ GSAT Satellite Application
  - ✓ Launch vehicle Technology
  - ✓ GSLV and Various Engine
  - ✓ Recent National and International Space Missions
- ✓ Cryogenic rockets
- ✓ Global Positioning System
- ✓ Galileo
- ✓ GLONASS
- ✓ IRNSS
- ✓ GAGAN
  - ★ Chandrayaan - I & II
  - ★ Mars Orbitor Mission
- Space Organisations
- Space race/Space junk
  - ✓ Recent updates
- South Asia Satellite: Significance
- Neutrino Observatory
- Solar Mission- ADITYA
- Gravitational Waves

### B Recent Developments

- Spitzer Space Telescope
- Chandra X-Ray Observatory
- Multi Application Solar Telescope
- Thirty Metre Telescope
- Resourcesat-2A
- Astrosat
- Sunspot
- Magnetars
- Neutron stars
- Air-breathing propulsion system
- Space Junk
- Graveyard Orbit
- Super cluster of galaxies known as "Saraswati".
- NASA: Asteroid impact and deflection assessment mission.
- Commercial use of Lithium-Ion battery technology
- Hyperspectral imaging satellite
- Water propulsion system in CUBESAT
- Saturn-cassini Mission
- OSIRIS-Rex passed by earth to reach asteroid Bennu
- Hackathon # Open Gov Data Hack

## Micro-topics listing of the Test Series Programme

### B Recent Developments

- Google Lunar X Prize Competition
- NASA-ISRO synthetic aperture radar satellite (NISAR)
- GSAT-17 heaviest communication satellite of ISRO
- Astrosat, Chandra and Hubble Jointly detect massive cosmic explosion
- Scientists create first global map of water on moon
- World's largest aircraft "Strato launch"
- MOM complete 3 years in orbit
- Solar mission Aditya L-1 in 2019
- Gravitational waves news
- Radio galaxies
- Indigenously developed S-Band Doppler weather radar
- Kelvin waves
- ISRO made satellite based chip system
- TDRS-M NASA
- Neutrino Observatory
- Indian Space Vision-2025
- 'NIRBHAY' sub sonic cruise missile
- Brahmos
- INS Kolkata
- INS Kiltan
- NAG missile
- Hydrogen bomb
- Vikram OPV
- Integrated Quarter Master Package
- INS Kalvari
- Prithvi II
- Air Independent Propulsion
- Rukmini

### C IT, Telecom & Electronics

- IT Industry in India
- Applications of Information Technology
- Display Technologies
- Telecommunication
- Government Initiatives
- Contemporary Debates
- Different Regulatory Bodies in India for ICT
- Ministry of Communication and information Technology
- Initiatives in 12th 5 year plan
- Major Policy Initiatives National Optical Fibre network
- Spectrum Management
- Government initiatives
- Cyber Law
- Computer Terminology and Fundamental
- History of Computers
- Types of Computer
- Component of Computer system
- Computer Languages
- Generation of computers
- Computer terminologies
- Supercomputer and its applications
- Display technologies
- Cathode ray
- LCD
- LED
- Plasma Monitors
- OLED
- Mobile Generations and Technology
- Definition and Impact of ICT on Society
- Evolution of Telecommunication
- Media Transmission technology
- Wireless , Optical Fibres, VSAT SIM
- IMEI 3G 4 G VoLTE Wi Max
- Mobile generations
- Smartphone
- Important concepts
- Internet, Types of Network and e-Governance
- Internet
- WWW
- IP
- URL
- HTTP
- Computer Security Tools: firewalls, hackers
- Global Internet Governance e
- Internet of things
- Internet Protocol
- VPN
- Networking : Bluetooth , WiFiHotSpot
- National E Governance Plan
- Recent Developments
- Government initiatives
- Digital India Initiative
- MeghRaj
- Code Free for India
- E-Kranti
- Bharat Net project
- Bharat QR
- Contemporary debates
- Net Neutrality
- Internet of Things
- Big Data Initiative and Privacy
- Cyber crime and security
- Spectrum Policy, Broad Band Policy
- Spectrum Policy in India
- Spectrum
- Mobile Spectrum
- Broadband Policy in India
- Cloud Computing
- Big Data
- Encryption
- Biometrics
- Virtual Reality
- Digital India
- QR Codes
- Recent Developments in IT & Telecom
- Quantum computing
- Project brainwave
- Sagar Vani System
- Locky Ransomware, Petya, WannaCry
- Hindi word for computer i.e., "SANGANAK"
- India's first technology and innovation support centre (TISC)
- Net neutrality
- National cyber coordination center
- Hortinet
- Digital Transaction Methodologies
- Block chain Technology
- Bitcoins
- Cyber Swachhta Kendra
- Digital Transaction Methodologies
- Bharat Net Project
- Wi-Fi Technology
- Digital Terrestrial Television Transmission System
- Internet of Things

### D Defense

- Missile System and its Classification
- India's Missile System
- India's Ballistic Missile Defence System
- UAVs in India
- Stealth Technology, Chemical Weapons, Biological Weapons

## Micro-topics listing of the Test Series Programme

### E Nano-Science & Nano-Technology

- Nanoscience Nanotechnology and Nanomaterials
- Applications of Nanotechnology
- Health & Environmental Impacts of Nanotechnology
- Social & Ethical Impacts
- Nano-Science& Nanotechnology in India
- Superconductivity Laser, Artificial Intelligence
- History Classification and Properties of Superconductors
- Application of Superconductors
- Types and Applications of LASERS
- Artificial Intelligence and Application
- Advantages and Disadvantages of Artificial Intelligence
- Superconductivity Laser, Artificial Intelligence
- What is Robotics? Robotics Terminologies
- Laws of Robotics Robotics in India
- Machine vs Computer vs Robots
- Parts of a Robot Controller Manipulator
- End Effector Sensor
- Classification of Robots
- Rolling Robots Walking Robots
- Autonomous Robots Artificial Intelligence
- Advantages and Disadvantages of Robot
- Applications of Robotics
- Industrial Sector Aerospace
- Healthcare Delivery Outer Space
- Exploration Military Robots
- Disaster Areas Entertainment
- Agriculture Domestic work
- Nano Technology
- What is Nanoscience and Nanotechnology?
- Origination of Nanoscience and Technology
- Basics of Nanoscience
- Nanomaterials Applications of nanotechnology
- Nano medicine
- Semiconductors and computing
- Food Textiles
- Sustainable energy Environment
- Transport Space
- Carbon Nanotube Graphene
- Quantum Dots Nano Bots
- Agriculture Adverse Health and Environmental Impacts of Nanotechnology
- Social and Ethical Impacts:
- Nano-science and Nano-technology in India

### F Nuclear Energy

- Nuclear-Power Policy of India
- Non-energy Applications of Nuclear Energy
- Impact of Radiation, Issue of Radioactive Waste
- Institutions involved in Nuclear Energy Development
- Nuclear & Radiological Disasters
- Nuclear Energy and Nuclear Fuels
  - ✓ Types of nuclear reactions
    - ★ Nuclear Fusion
    - ★ Nuclear Fission
  - ✓ Nuclear Fuel – Stage 1 Stage 2 Stage 3
- Nuclear Programme in India
  - ✓ N-Power Policy of India
    - ★ Advantages of Nuclear Energy
    - ★ Disadvantages of Nuclear Energy
  - ✓ Institutions involved in Nuclear energy Development, AERB
  - ✓ Safety standards in Nuclear Power plants
  - ✓ India's 3 stage Civil Nuclear Programme
  - ✓ Nuclear Reactors in India
  - ✓ Kudankulam Project
- ✓ Jaitapur Plant
- Organisation Institutions
  - ✓ Department of Atomic Energy
  - ✓ BHABHA
- Radioactivity
  - ✓ Radiation and Radioactivity
  - ✓ Radiation Technologies and Applications
  - ✓ Radioactive Waste and Nuclear Waster Management
  - ✓ Nuclear & Radiological Disasters

### G Biotechnology

- Application of Biotechnology
- Biotechnology Projects
- Issue of Bio-Piracy
- Bioinformatics
- Biotechnology and IPR Issue
- Ethical Dimension In Biotechnology

### H Renewable Energy

- Ocean Thermal Energy Conversion (OTEC)
- Concept of Green Building
- Tidal, Wave, Geothermal Energy, Fuel Cells

### I Robotics

- Robotics & Artificial Intelligence
- Applications of Robotics
- Robotics and Issues of Unemployment



## Micro-topics listing of the Test Series Programme

### J Achievements of Indians in Science & Technology

- Scientists of Ancient India
- Science and Scientists of Medieval India
- Scientists of Modern India
- Policies & Reports related to Science
  - ✓ Technology Vision Document 2035
  - ✓ National Biotechnology Development Strategy 2015-2020
  - ✓ National Intellectual Property Rights Policy
  - ✓ Policy on Synthetic Biology
  - ✓ Law Commission Report on Human DNA Profiling.

### K IPR and other Miscellaneous Issues

- IPR Intellectual Property Rights
  - ✓ Copyrights
  - ✓ Trademarks
  - ✓ Patents
  - ✓ Industrial Design
  - ✓ Trades Secrets
  - ✓ IPR and Agriculture

### L IN NEWS

#### SPACE

- Outer Space Treaty
- Neutrino Observatory
- Solar Mission- Aditya
- Chandrayaan-2 Mission
- Chandrayaan-2 Mission
- Gravitational Waves
- Importance of Navigation System
- Reusable Launch Vehicle
- About SN Bose
- Stephen Hawking
- Space Activities Bill, 2017
- ISRO as Soft Power
- ISRO'S role in Socio - Economic Development
- Space Debris
- GAGANYAAN
- 20 years of International Space Station

#### Biotechnology & Health

- Tuberculosis
- Mother-to-Child Transmission of HIV
- Nipah Virus Infection
- Generic Drugs in India
- Stent Implants
- Intellectual Property Rights: Issues and Concerns
- Misuse of Secondary Patent Methodology
- Digital Biopiracy
- Clinical Applications of the Whole Genome Sequencing
- Three-Parent Babies Permitted in the UK
- Mass Embryo Transfer
- Issues Related to Gm Food
- Importance of Genetic Testing
- Health Geo-Mapping Project
- Digital Health Technology Eco-System
- Ethical Dimension In Biotechnology
- Law Commission Report on Human DNA Profiling
- Law against Genetic

#### Discrimination

- Genome Editing: What, Why and Way Forward.
- Biotechnology in India
  - ✓ Department of BT
  - ✓ Various Fields of BT
  - ✓ R&D
- Genetics and Biotechnology
  - ✓ Industrial genetics
  - ✓ Genetic engineering
  - ✓ DNA sequencing
  - ✓ Nucleic acid probes
  - ✓ Genomics and proteomics
  - ✓ Bioprocess/fermentation technology
- Biological fuel generation
  - ✓ Global warming and the significance of fossils fuels
  - ✓ Biofuels from biomass
  - ✓ Bioethanol from biomass
  - ✓ Biodiesel
  - ✓ Methane
  - ✓ Hydrogen
- Environmental Biotechnology
  - ✓ Microbial Ecology
  - Environmental Biotechnology
  - ✓ Waste water and sewage treatment
  - ✓ Landfilling technologies
  - ✓ Composting
  - ✓ Bioremediation
  - ✓ Detect and monitoring of pollutants
  - ✓ Microbes and the geological environment
- Plant and Forest biotechnology
  - ✓ Plant biotechnology
  - ✓ Forest biotechnology
- Animal and insect biotechnology
  - ✓ Genetic manipulation and transgenic animals
  - ✓ Genetically engineered hormone and vaccines
  - ✓ Animal organs for human patients
  - ✓ Genetically modified insects
- Food and Beverage

#### Biotechnology

- ✓ Food and beverage fermentations
  - \* Microorganisms as food, Enzymes and food processing
  - \* Amino acids, vitamins and sweeteners
  - \* Organic acids and polysaccharides
  - \* Public acceptance and safety of new biotechnology foods
- ✓ Biotechnology and medicine
  - \* Pharmaceuticals and bio-pharmaceuticals
  - \* Antibiotics
  - \* Vaccines and monoclonal antibodies
  - \* Bio-pharmaceuticals /therapeutic proteins
  - \* Pharmacogenetics
  - \* Molecular biology and human disease
  - \* Diagnostics in developing countries
  - \* Gene therapy
  - \* Systems biology and medicine
- ✓ Stem cell biotechnology
- Protection of biotechnological inventions
  - ✓ Patent protection Trade secrets
  - ✓ Plant breeders' rights
- Recent Development in Biotechnology
  - ✓ Achievements of Biotechnology indifferent fields
  - ✓ Genome sequencing of Ragi done for the first time in the world
  - ✓ GM mustard policy
  - ✓ DNA as storage device
  - ✓ Biomarker
  - ✓ Algae based footwear
  - ✓ Artificial Womb

## Micro-topics listing of the Test Series Programme

### L IN NEWS

- ✓ K. grants gene editing license
- ✓ GM Mosquito
- ✓ DBT launched "Sohum" an innovative newborn hearing screening device
- ✓ Biotech-KISAN scheme
- ✓ India's first biomass to ethanol plant & its commercialization
- ✓ Digital Biopiracy
- ✓ Genetically Modified Mosquito
- ✓ Designer Babies' or Three Parents Babies
- ✓ National Biotechnology Development Strategy 2015-2020

#### Defense

- India's Missile System
- Brahmos and its Significance
- India's Ballistic Missile Defence System
- Indian Submarines and Naval Ships
- Light Combat Aircraft
- UAVs in India
- Chemical Weapons
- Biological Weapons
  - ✓ Organisations
  - ✓ Missile system and classification
    - \* On the basis of type
    - \* On the basis of launch vehicle
    - \* On the basis of Range
    - \* On the basis of propulsion system
  - ✓ Ballistic vs Cruise Missile
  - ✓ IGMDP Intergrated Guided Missile Development Programme
    - \* PrithviTrishul Nag Akash AGNI
    - \* Shaurya Missile
    - \* ASTRA Missile
    - \* Dhanush
    - \* Prahaar
  - ✓ Brahmos Missile System
  - ✓ Anti-Ballistic Missile System
  - ✓ Frigates Destroyers and Aircraft Carriers
  - ✓ AWACS
  - ✓ Light Combat Aircraft
    - \* Unmanned Aerial

- Vehicle
  - \* Stealth technology
  - \* Chemical Weapon
  - \* Biological Weapon
- ✓ Submarines
  - \* Indian Submarines and Naval Ships
  - \* Commissioned Submarines
  - \* Project 75
  - \* INS Astradharini

#### Policies Related to Science

- STI Policy 2013 of India: Analysis
- The Paradox of Innovation
- Analysis of INSPIRE Scheme
- National Biotechnology Development Strategy 2015-2020
- Organ Donation Rules in India
- Policy on Synthetic Biology
- DNA Technology (Use and Application) Regulation Bill, 2018
- Maharashtra's Public Cloud Policy
- National Policy on Electronics 2019
- Roadmap for Drones
- National Wind-Solar Hybrid Policy
- Draft Rules for E-Pharmacies
- National Digital Communications Policy
- Net Neutrality

#### IT & Telecom

- Internet Of Things
- Big Data Initiative
- Supercomputer and its Applications
- Li-Fi Technology and its Application
- Use of it in Financial Inclusion
- Credit/Debit Card Crimes
- Bharat net Project
- Wanna Cry Malware
- Concept of Cyber-Physical Systems
- Using Electronic Signature Service: Significance & Applications
- Digital India: Achievements
- Adoption of Blockchain Technology to Stop Bank Frauds

- Artificial Intelligence and Society
- Two Authentication Procedure
- Facial Authentication Working
- Issue of Internet Governance
- Quantum computing
- National supercomputing mission
- Data Protection-B N Srikrishna committee
- Data Localisation and Related Issues
- National Digital Literacy Mission and Digital NE vision
- National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS)
- Bullet Train

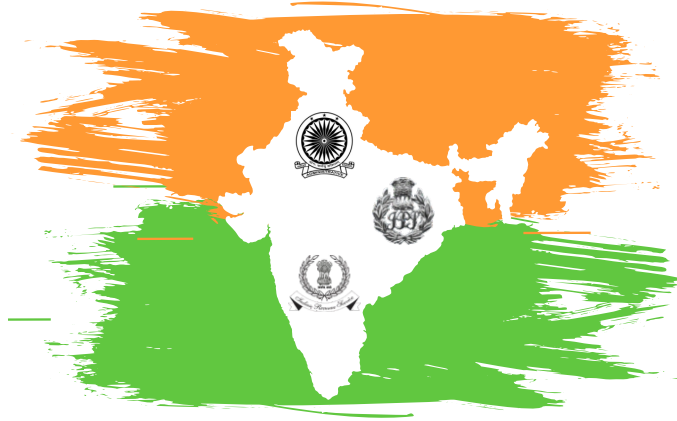
#### Initiatives in the Field of Science & Technology

- Technology and Food Security
- BOOSTING Horticulture through Remote Sensing
- Hyperloop Transportation Technology
- Cloud Seeding Experiment In Maharashtra
- Nano-Technology Medicines
- Hydrogen Bomb
- Ear Tagging In Cattle
- e-Cigarette
- Kudankulam Nuclear Power Plant
- Geo-Tagging The Assets In Mgnrega
- Robot Tax and its Implications
- India & World Collaboration in Science Projects
- Mother-to-Child Transmission of HIV
- Nipah Virus Infection
- Avian Influenza or Bird Flu
- Bovine TB
- Encephalitis
- Kyasanoor Forest Disease (Monkey Fever)
- Hospital-Acquired Infection
- Rotavirus
- The Middle East Respiratory Syndrome Virus
- Swine Flu
- Chikungunya
- Tuberculosis



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