

IAS  
2025

## PRELIMS TEST SERIES 2025

COMPLETE REVISION  
*through* TEST  
(CRT)

TOTAL 46 TESTS

14

FUNDAMENTAL  
TESTS

06

SUBJECT  
REVISION  
TESTS

04

CURRENT  
AFFAIRS  
REVISION  
TESTS

06

CSAT TESTS

16

MOCK TESTS  
(GS & CSAT)

BATCH  
STARTS

19

JANUARY, 2025



PROGRAMME FEE

₹ 6,500 (+GST)



Tests as per **Changing Pattern** of the **UPSC Prelims**



**Concept & Essential Skills Building** through Tests and their Discussion



**Level-wise Questions** for gradual improvement & exam readiness



**One-on-one mentorship** for Personalised Guidance



**Emphasis on both Static & Current Events** as per the evolving format



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# PROGRAMME FEATURES



## **A Simulation of the Real Challenge**

The test papers have been designed on similar lines to the UPSC



## **Strengthening Concepts & Acquiring Essential Exam Skills**

The test series will help you to test the concepts, knowledge, and factual information as well as acquire the necessary skills to solve the question paper.



## **In-Depth Analysis 'Unveiling Insights and Learning from Video Discussion'**

This programme holds a unique feature of test discussion of all the sub-sectional, sectional and Current Affairs Tests.



## **Personalized Guidance & Mentorship**

The programme equips every aspirant with an opportunity to connect with our esteemed faculty through one-to-one discussion, doubt-clearing sessions, and mentorship.



## **Comprehensive Performance Analysis**

The programme is based on the 3-layer performance analysis which includes a test report, detailed analysis, and an integrated All India Ranking for online as well as classroom students.

# PROGRAMME DELIVERY

#1

## EXTENSIVE TESTS BREAKDOWN

The number of tests in this series will be 68. The sub-categorization has been given below:



#2

## LEVEL-WISE QUESTIONS

The evolving nature of the UPSC Prelims Questions can be tackled through the level-wise practice of questions. The following levels are:

### LEVEL: 1 ELEMENTARY & PAINLESS

Though constituting only 10% in Prelims, questions are easier to solve. Such questions came directly from relevant and popular sources and require a very basic understanding of factual awareness.

### LEVEL: 2 APPROACHABLE

Questions from this category are relatively approachable given the candidate has good command over basics and has revised well.

### LEVEL: 3 REAL CHALLENGE

It will test your thoughts, core and depth for a subject/topic. It warrants interlinked and dynamic

### LEVEL: 4 IMCAPACITATED

Questions from this section are Vague, and not found in regular standard sources, everything under the sun can be asked. Intended to maximize your negatives. It's better to leave such

#3

## FUNDAMENTAL TESTS

### A Deep Dive into Subject Syllabus and Enhanced Preparation

They have been designed in such a way that they will cover the entire syllabus of each subject. The questions on each subtopic will bring more depth to your preparation and will give a sense of completion of the subject. The test will consist of 100 questions each.

#4

## SUBJECT REVISION TESTS

### Assessing Subject Proficiency – 'Holistic Performance Evaluation'

The Subject Revision tests will help you analyze your overall performance in each subject. The questions in these tests will be a great mix of static along with current events associated with each subject. Each sectional test will be of 100 questions.

#5

## CURRENT AFFAIRS TESTS

### Exploring the Dynamic Landscape through Dedicated Tests

The current affairs tests will help in interlinking the current events with the static portion of the subject. The tests will contain 100 questions purely on current events.

#6

## BOOSTING SKILLS & SPEED FOR CSAT

The CSAT Tests are divided into three divisions having one test each on Reasoning, Quantitative Aptitude, and Reading Comprehension. The test will consist of 50 questions.

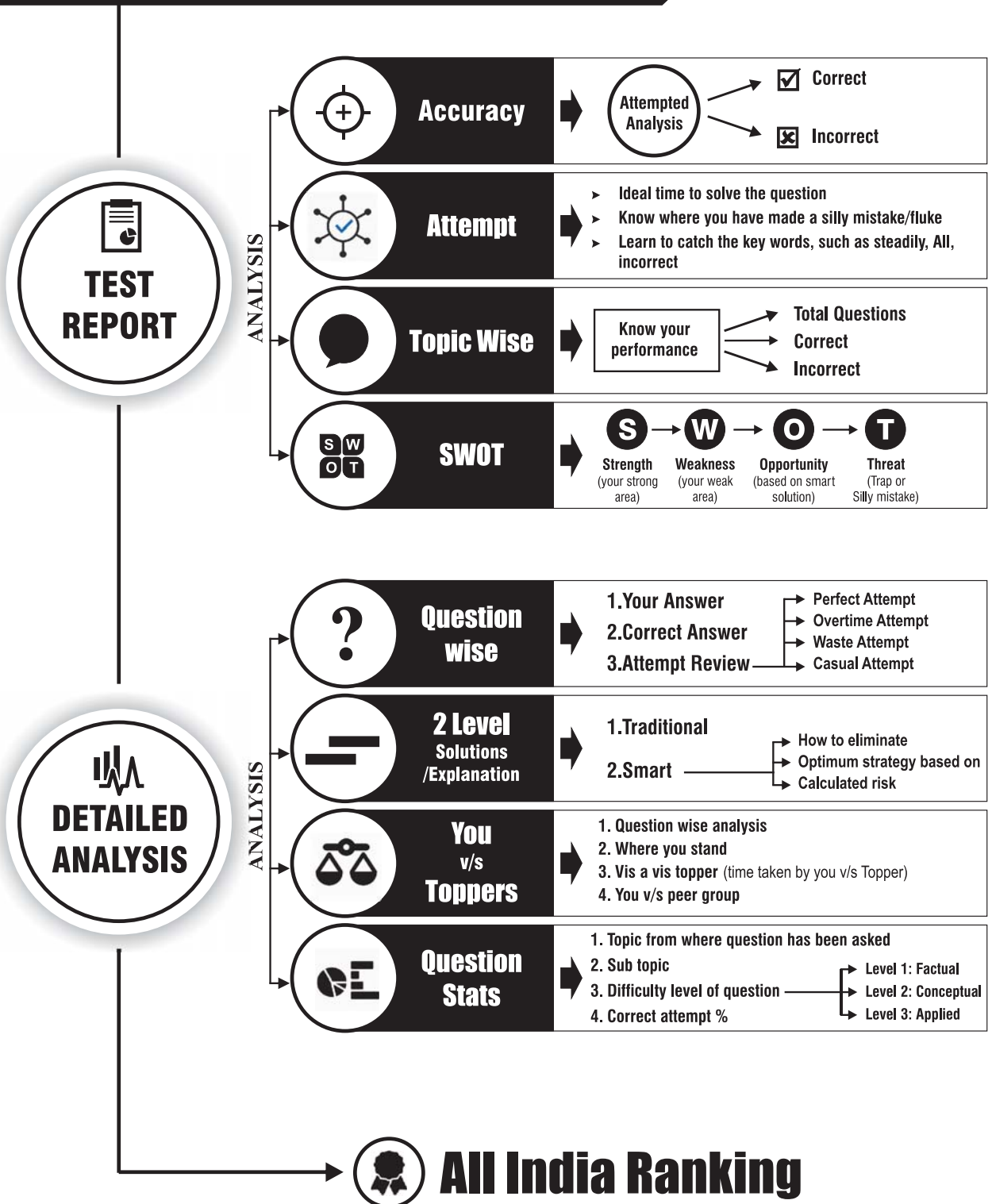
#7

## REALISTIC SIMULATION

### Mock Tests Emulating the UPSC Pattern for Exam-Ready Preparation

The primary feature of the Mock Tests is that the tests are completely based on the UPSC pattern to give you a real-time environment of the examination and boost your preparation.

# Performance Analysis





# TEST SCHEDULE

TEST NO. & DATE	SUBJECT	TOPICS COVERED
<b>TEST: 1</b> <b>19 JANUARY, 2025</b>	<b>Fundamentals of Polity -1</b>	Basic Concepts (NCERT); Constitutional Development; Salient features of the Indian Constitution; Union & States, Citizenship; Fundamental Rights; Directive Principles of State Policy; and Fundamental Duties
<b>TEST: 2</b> <b>22 JANUARY, 2025</b>	<b>Fundamentals of Polity -2</b>	Executive; Legislature; Judiciary; Centre-State Relations; Local Governance; Constitutional and Non- Constitutional bodies; Special Areas; UTs; Political dynamics; Governance, Schemes, Policy and initiatives; Recent Developments
<b>TEST: 3</b> <b>25 JANUARY, 2025</b>	<b>Fundamentals of Economy-1</b>	Fundamental of Economy (NCERT); Micro economy, Macro economy; National Income Accounting of India; Inflation Money and Banking; Money and Financial Sectors; RBI and Monetary Policy
<b>TEST: 4</b> <b>28 JANUARY, 2025</b>	<b>Fundamentals of Economy-2</b>	Public Finance, Budgeting, Fiscal Policy; Planning and Inclusive Growth; Poverty and Unemployment Sectors of Economy (Agriculture, Industry, Services, and External sectors); Recent Developments
<b>TEST: 5</b> <b>29 JANUARY, 2025</b>	<b>CSAT-1</b>	Reading Comprehension-1

TEST NO. & DATE	SUBJECT	TOPICS COVERED
<b>TEST: 6</b> <hr/> <b>31 JANUARY, 2025</b>	<b>Fundamentals of Environment-1</b>	Fundamentals of Ecology and Environment (NCERT); Basic Concept of Ecology; and its factors; Levels of Ecological Organization; Ecosystem: Structure and Functions; Biodiversity and Threats; Conservation Methods; Biodiversity of India and the World
<b>TEST: 7</b> <hr/> <b>02 FEBRUARY, 2025</b>	<b>Fundamentals of Environment-2</b>	Environmental Pollution and Management; Climate Change and Mitigation; Biodiversity Conservation Efforts; Environmental Governance (National and International); Environmental Impact Assessment; Recent Developments
<b>TEST: 8</b> <hr/> <b>03 FEBRUARY, 2025</b>	<b>Current Affairs-1</b>	May to August 2024
<b>TEST: 9</b> <hr/> <b>05 FEBRUARY, 2025</b>	<b>Fundamentals of History 1</b>	NCERT (Old & New); Ancient History: Political Structure of Ancient India; Economic Conditions of Ancient India; Sociocultural development of Ancient India; Medieval History: Political Structure of Medieval India; Economic Conditions of Medieval India; Socio-cultural development of Medieval India
<b>TEST: 10</b> <hr/> <b>07 FEBRUARY, 2025</b>	<b>Fundamentals of History 2</b>	NCERT (Old & New); Modern India: India from Early 18th Century to the 19th century; Beginning of India's Struggle for Freedom; India's freedom movement in the 20th Century; India under the British rule
<b>TEST: 11</b> <hr/> <b>09 FEBRUARY, 2025</b>	<b>Fundamentals of History 3</b>	Art & Culture: Architecture & Sculptures; Religion, Language & Literature; Miscellaneous; Paintings, Pottery and Numismatic; Dance, Drama and Music; Indian Theatre and Puppetry; Sports, Recent Developments

TEST NO. & DATE	SUBJECT	TOPICS COVERED
<b>TEST: 12</b> <b>10 FEBRUARY, 2025</b>	<b>CSAT-2</b>	Quantitative Aptitude - 1
<b>TEST: 13</b> <b>12 FEBRUARY, 2025</b>	<b>Fundamentals of Geography 1</b>	Fundamental of Geography of India and the World (NCERT) General Geography: Origin of Universe, Solar System, Evolution of Earth, Earth's Interior, Rocks and Minerals; Geomorphology: Endogenic and Exogenic factors and Processes, Landforms and their Evolutions
<b>TEST: 14</b> <b>14 FEBRUARY, 2025</b>	<b>Fundamentals of Geography 2</b>	Climatology, Oceanography, and Biogeography of the World Human and Economic Geography of India and the World, Recent Developments
<b>TEST: 15</b> <b>16 FEBRUARY, 2025</b>	<b>Fundamentals of Geography 3</b>	Indian Geography: Location, Physiography and Drainage System of India; Climate and Biogeography of India
<b>TEST: 16</b> <b>18 FEBRUARY, 2025</b>	<b>Fundamentals of Science &amp; Technology 1</b>	Fundamentals of Physics, Chemistry, and Biology & their application in daily life; Health and Diseases; Biotechnology and applications; Nuclear energy and Technology
<b>TEST: 17</b> <b>20 FEBRUARY, 2025</b>	<b>Fundamentals of Science &amp; Technology 2</b>	Space Science and Technology; Defense technology and Defense exercises; Nanotechnology and its application IT, Electronics and Communications; AI and Robotics; Intellectual property rights; Miscellaneous; Recent Developments
<b>TEST: 18</b> <b>21 FEBRUARY, 2025</b>	<b>CSAT - 3</b>	Reasoning - 1



TEST NO. & DATE	SUBJECT	TOPICS COVERED
<u>TEST: 19</u> 22 FEBRUARY, 2025	CSAT - 4	Reading Comprehension-2
<u>TEST: 20</u> 23 FEBRUARY, 2025	CSAT - 5	Quantitative Aptitude - 2
<u>TEST: 21</u> 24 FEBRUARY, 2025	CSAT - 6	Reasoning - 2
<u>TEST: 22</u> 25 FEBRUARY, 2025	Current Affairs-2	September – December 2024
SECTIONAL TESTS		
<u>TEST: 23</u> 27 FEBRUARY, 2025	Sectional Test 1	Polity & Governance
<u>TEST: 24</u> 01 MARCH, 2025	Sectional Test 2	Economy
<u>TEST: 25</u> 03 MARCH, 2025	Sectional Test 3	Environment & Ecology
<u>TEST: 26</u> 05 MARCH, 2025	Sectional Test 4	History & Culture of India
<u>TEST: 27</u> 07 MARCH, 2025	Sectional Test 5	Geography
<u>TEST: 28</u> 08 MARCH, 2025	Sectional Test 6	Science & Technology
MOCK TESTS		
<u>TEST: 29</u> 09 MARCH, 2025	Mock 1	Paper 1: General Studies
<u>TEST: 30</u> 09 MARCH, 2025	Mock 2	Paper 2: CSAT
<u>TEST: 31</u> 16 MARCH, 2025	Mock 3	Paper 1: General Studies

TEST NO. & DATE	SUBJECT	TOPICS COVERED
<b>TEST: 32</b> <b>16 MARCH, 2025</b>	<b>Mock 4</b>	Paper 2: CSAT
<b>TEST: 33</b> <b>23 MARCH, 2025</b>	<b>Mock 5</b>	Paper 1: General Studies
<b>TEST: 34</b> <b>23 MARCH, 2025</b>	<b>Mock 6</b>	Paper 2: CSAT
<b>TEST: 35</b> <b>30 MARCH, 2025</b>	<b>Mock 7</b>	Paper 1: General Studies
<b>TEST: 36</b> <b>30 MARCH, 2025</b>	<b>Mock 8</b>	Paper 2: CSAT
<b>TEST: 37</b> <b>06 APRIL, 2025</b>	<b>Mock 9</b>	Paper 1: General Studies
<b>TEST: 38</b> <b>06 APRIL, 2025</b>	<b>Mock 10</b>	Paper 2: CSAT
<b>TEST: 39</b> <b>13 APRIL, 2025</b>	<b>Mock 11</b>	Paper 1: General Studies
<b>TEST: 40</b> <b>13 APRIL, 2025</b>	<b>Mock 12</b>	Paper 2: CSAT
<b>TEST: 41</b> <b>17 APRIL, 2025</b>	<b>Current Affairs 3</b>	Budget and Economic Survey; India Year Book
<b>TEST: 42</b> <b>20 APRIL, 2025</b>	<b>Mock 13</b>	Paper 1: General Studies
<b>TEST: 43</b> <b>20 APRIL, 2025</b>	<b>Mock 14</b>	Paper 2: CSAT
<b>TEST: 44</b> <b>24 APRIL, 2025</b>	<b>Current Affairs 4</b>	January-April 2025
<b>TEST: 45</b> <b>27 APRIL, 2025</b>	<b>Mock 15</b>	Paper 1: General Studies
<b>TEST: 46</b> <b>27 APRIL, 2025</b>	<b>Mock 16</b>	Paper 2: CSAT

# LIST OF SOURCES

Subject	Sources
<b>Indian Polity &amp; Constitution</b>	<ul style="list-style-type: none"> <li>◦ Indian Polity for Civil Services Examinations – M. Laxmikanth. (Polity)</li> <li>◦ Introduction to the Constitution of India – D. D. Basu (Constitution)</li> <li>◦ GSSCORE Target PT Material</li> </ul>
<b>Indian History and Culture</b>	<ul style="list-style-type: none"> <li>◦ India's Ancient Past – R.S. Sharma. (Ancient India – Text Book)</li> <li>◦ History Of Medieval India – Satish Chandra. (Medieval India – Text Book)</li> <li>◦ History Of Modern India – Bipan Chandra. (Modern India – Text Book)</li> <li>◦ India's Struggle For Independence – Bipan Chandra. (Modern India – Read like a story)</li> <li>◦ Indian Art and Culture – Nitin Singhania. (Culture)</li> <li>◦ Ancient and Medieval India – Poonam Dalal (Ancient and Medieval India)</li> <li>◦ A Brief History of Modern India – Spectrum (Modern India)</li> <li>◦ GSSCORE Target PT Material</li> </ul>
<b>Geography</b>	<ul style="list-style-type: none"> <li>◦ NCERT (Class 7<sup>th</sup> to 12<sup>th</sup>)</li> <li>◦ Certificate Physical and human Geography by Goen Che Leong</li> <li>◦ GSSCORE Target PT Material</li> </ul>
<b>Environment</b>	<ul style="list-style-type: none"> <li>◦ Class 12<sup>th</sup> Biology</li> <li>◦ Environment &amp; Ecology: A Complete Guide by R. Rajgopalan</li> </ul>

	<ul style="list-style-type: none"><li>◦ IGNOU Environment &amp; Ecology</li><li>◦ GSSCORE Target PT Material</li></ul>
<b>Economics</b>	<ul style="list-style-type: none"><li>◦ NCERT (10<sup>th</sup>, 11<sup>th</sup> And 12<sup>th</sup>)</li><li>◦ Economic Survey of Last 3 years</li><li>◦ Indian Economy - Ramesh Singh</li><li>◦ GSSCORE Target PT Material</li></ul>
<b>Science &amp; Technology</b>	NCERT (6 <sup>th</sup> to 10 <sup>th</sup> ) <ul style="list-style-type: none"><li>◦ GSSCORE Target PT Material</li></ul>
<b>Current Affairs</b>	<ul style="list-style-type: none"><li>◦ GSSCORE Target PT Material</li></ul>

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# SUB TOPIC LISTING

## TEST - 1

### FUNDAMENTALS OF POLITY - 1

(BASIC CONCEPTS (NCERT); CONSTITUTIONAL DEVELOPMENT; SALIENT FEATURES OF THE INDIAN CONSTITUTION; UNION & STATES, CITIZENSHIP; FUNDAMENTAL RIGHTS; DIRECTIVE PRINCIPLES OF STATE POLICY; AND FUNDAMENTAL DUTIES.)

#### 1. Basic Concepts

- ▶ Political Theory (NCERT XI)
- ▶ Indian Constitution at work (NCERT XII)
- ▶ Meaning, Importance, and Functions of the Constitution
- ▶ Types of Constitution
- ▶ Types of Government
- ▶ Parliamentary and Presidential System
- ▶ Types of Parliamentary forms of Government

#### 2. Constitutional Development

- ▶ Evolution of Indian Constitution: Key Charter Acts, Government of India Acts, Demands of Constituent Assembly
- ▶ Constituent Assembly: Composition, Features, and Key debates
- ▶ Making of the Constitution
- ▶ Important personalities
- ▶ Sources borrowed

#### 3. Salient features of the Indian Constitution

- ▶ Key Features of the Indian Constitution
- ▶ Preamble: Ideals, Values, and Objectives of the Indian Constitution, Significance, and its Amendability, Preamble as Part of the Constitution
- ▶ Federal and Unitary system of Government, Federal and Unitary Features of the Indian Constitution

#### 4. Union & States

- ▶ Nation and state
- ▶ Form of Indian state
- ▶ Union and its Territory
- ▶ Indestructible Union of Destructible States
- ▶ Reorganization of Indian States post-Independence

#### 5. Citizenship

- ▶ Meaning and Significance
- ▶ Constitutional Provisions
- ▶ CAA, NRC, NPR, PIO/OCI

#### 6. Fundamental Rights

- ▶ Evolution, objectives and features
- ▶ Philosophical dimension of Part III
- ▶ Meaning of state for Part III and Part IV
- ▶ Meaning and importance of Fundamental Rights
- ▶ Rule of Law
- ▶ Right to Equality, Equality before law and equal opportunity of law
- ▶ Right to Freedom
- ▶ Right to life
- ▶ Right against Exploitation
- ▶ Right to Freedom of Religion
- ▶ Cultural and Educational Rights
- ▶ Article 31
- ▶ Writs and their uses



- ▶ Article 33-35
- ▶ Procedure established by law and due process of law
- ▶ Key SC judgments
- ▶ Amendments to the Part III
- ▶ Effect of Emergencies

## 7. Directive Principles of State Policy

- ▶ Evolution and Sources
- ▶ Basic features
- ▶ Socialistic Principles
- ▶ Gandhian Principles
- ▶ Liberal-Intellectual Principles
- ▶ New Directives Principles
- ▶ Criticism and utility
- ▶ Implementation
- ▶ Relationship between FRs and DPSPs: Key Judgments and Current situation

## 8. Fundamental Duties

- Evolution and Features
- Key duties
- Enforceability and justiciability
- Rights and Duties
- Criticism and Significance

## 9. Amendment to Constitution

- ▶ Amendability of the Constitution: evolution, and key judgments
- ▶ Procedure for the amendment
- ▶ Types of the amendment
- ▶ Basic structure of the Indian Constitution: Evolution, meaning, significance, and key judgments

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## TEST - 2

## FUNDAMENTALS OF POLITY - 2

(EXECUTIVE; LEGISLATURE; JUDICIARY; CENTRE-STATE RELATIONS; LOCAL GOVERNANCE; CONSTITUTIONAL AND NON- CONSTITUTIONAL BODIES; SPECIAL AREAS; UTS; POLITICAL DYNAMICS; GOVERNANCE, SCHEMES, POLICY AND INITIATIVES; RECENT DEVELOPMENTS)

## 1. Executive

- ▶ President: Appointment, term of office, qualification, Election procedure
- ▶ Presidential Powers
- ▶ Impeachment of the President
- ▶ Vice-President: Appointment, term of office, qualification, Election procedure, Removal
- ▶ Powers and Functions of Vice-President
- ▶ Council of minister: Union and States
- ▶ Prime Minister
- ▶ Responsibilities and powers of the Ministers
- ▶ Office of Governor
- ▶ Powers and Functions of Governor
- ▶ Chief Minister
- ▶ Cabinet and Cabinet Committees
- ▶ Bureaucracy, Permanent Executives

## 2. Legislature

## Parliament

- ▶ Organization and Composition
- ▶ Powers and Functions of Parliament
- ▶ Powers and Privileges of Parliament and MPs
- ▶ Sessions, Proceeding, Dissolution, Prorogation, Effects on bills, President' address
- ▶ Presiding Officers of Parliament: Speaker, Deputy speaker, Chairman, Deputy Chairman of Rajya Sabha
- ▶ Rajya Sabha: Composition, Election
- ▶ Lok Sabha: Composition, Election
- ▶ Comparison of Lok Sabha and Rajya Sabha
- ▶ Law making Procedure
- ▶ Motions, Resolutions and Bills
- ▶ Bills: Types and procedure, Joint sitting
- ▶ Types of majority
- ▶ Parliamentary committees
- ▶ Separation of Power, Sovereignty of Parliament
- ▶ funds of India
- ▶ office of profit
- ▶ State Legislative Assemblies and Councils

- ▶ Comparison of Rajya Sabha and State Legislative Councils
- ▶ Leader of Opposition

## 3. Judiciary

- ▶ Broad features of our judicial system
- ▶ Supreme Court: Composition and Appointment of Judges
- ▶ Terms and Removal of Supreme Court Judges
- ▶ Independence of Supreme Court
- ▶ Jurisdiction of SC
- ▶ Appointment of High Court Judges
- ▶ Terms, Removal, and Transfer of High Court Judges
- ▶ Jurisdictions and power of SC
- ▶ Jurisdictions and power of High Courts
- ▶ Supreme Court vs. High Court
- ▶ Lower judiciary: Appointment, Jurisdictions and Power
- ▶ Judicial Review, activism, restraints
- ▶ Public interest litigation (PIL)
- ▶ Tribunals: Types, composition, Power and functions
- ▶ NALSA, Lok Adalats, Gram Nyayalayas, Lokpal and Lok Ayuktas
- ▶ Law Commission of India, Bar Council of India
- ▶ E-Courts, Tele-law initiative, etc.

## 4. Local Governance

- ▶ Evolution of the third tier governance in India
- ▶ 73rd AA
- ▶ 74th AA
- ▶ Compulsory and Voluntary Provisions
- ▶ PESA Act
- ▶ Types of urban local bodies
- ▶ Tenure and Election of the Local bodies
- ▶ XIth and XIIth Schedules
- ▶ Local Governance: Significance and Problems associated
- ▶ Role of State Election Commission

- ▶ Role of State Finance Commission

## 5. Centre-State Relations

- ▶ Administrative, Legislative, and Financial relations between Centre and states
- ▶ Interstate Relations, Interstate councils, Zonal councils
- ▶ Cooperative federalism: concept and various dimensions
- ▶ Issue of devolution of funds, Special category states, etc.
- ▶ Emergency provisions
- ▶ National Emergency, 42nd amendment and 44th amendment
- ▶ Constitutional Emergency, Misuse of Art. 356
- ▶ Financial Emergency
- ▶ Emergency and federal structure; Key SC judgments, and Commissions
- ▶ Impact of emergencies

## 6. Special Areas

- ▶ Administration of Scheduled Areas
- ▶ Administration of Tribal Areas
- ▶ 5th schedule areas and 6th schedule areas
- ▶ Tribal sub plan
- ▶ Autonomous Councils
- ▶ Role of Governor and President with respect to tribal areas
- ▶ Special Provisions for Some States

## 7. UTs

- ▶ Creation and categories
- ▶ Administration of Union Territories

## 8. Constitutional and Non-Constitutional bodies

- ▶ Comptroller and Auditor General of India
- ▶ Attorney and advocate general
- ▶ Union Public Service Commission, SPSC, JPSC
- ▶ Election Commission
- ▶ Finance Commission
- ▶ Goods and Services Tax Council
- ▶ National Commissions for SCs, STs, BC
- ▶ National Commission for Women
- ▶ National Commission for Minorities
- ▶ NITI Aayog
- ▶ National Human Rights Commission of India, SHRC
- ▶ Central Information Commission, ICs, SIC,

- ▶ Central Vigilance Commission, Central Bureau of Investigation
- ▶ National Disaster Management Authority
- ▶ National Investigation Agency

## 9. Political dynamics

- ▶ Representation of People Act, 1950 and 1951
- ▶ Electoral reforms, State funding of Elections, Electoral Bonds
- ▶ Criminalization of politics, Irregularities in polling, Negative or neutral voting
- ▶ Political parties in India, Party reforms, Problems in the working of parties
- ▶ Anti-Defection Law, Strengthening of Anti-defection measures
- ▶ Pressure groups: Types, Functions, Role in Democracy and Criticism

## 10. Governance

- ▶ Structure of Ministries/departments
- ▶ Secretariat organization: Functions of the secretariat, Functions of attached and subordinate office
- ▶ Advantages of the separation of secretariat and executive organization
- ▶ Strengths and weaknesses of the existing structure, Recommendations for improving the Organizational structure
- ▶ Rights and Liabilities of the Government
- ▶ Foreign Policy

## 11. Schemes, Policy and initiatives

- ▶ Special Provisions Relating to Certain Classes
- ▶ Schemes related to the health sector, NFHS survey
- ▶ National Education Policy, Schemes related to the education
- ▶ Schemes related to the Vulnerable Sector
- ▶ Rural development and poverty alleviation programmes
- ▶ Schemes related to the urban dwellers
- ▶ Schemes related to WASH
- ▶ Bills/Acts
- ▶ Miscellaneous

## 12. Recent Developments

- ▶ Hate Speech Online
- ▶ Marital rape, an indignity to women
- ▶ Caste Census
- ▶ Gender technology gap

- ▶ Issue of Marriageable Age for Women
- ▶ Global Social Mobility Index
- ▶ Khushi and Ujjawala Sanitary napkin initiatives
- ▶ Bharatiya Poshan Krishi Kosh
- ▶ School Education Quality Index
- ▶ Samagra Shiksha Abhiyan
- ▶ e-Lok Adalats
- ▶ Armed Forces Tribunal
- ▶ 'Private Property as a human right
- ▶ Article 32 and its ever changing interpretation
- ▶ Freebies Politics in India
- ▶ Simultaneous Elections
- ▶ Recusal in Judiciary
- ▶ Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules 2021
- ▶ Right to be Forgotten
- ▶ Criminal Justice System
- ▶ One Nation One Ration Card
- ▶ E-Gram Swaraj Portal
- ▶ Ayushman Bharat Health Account mobile application

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## TEST - 03

## FUNDAMENTALS OF ECONOMY-1

(FUNDAMENTAL OF ECONOMY (NCERT); MICRO ECONOMY, MACRO ECONOMY; NATIONAL INCOME ACCOUNTING OF INDIA; INFLATION; MONEY AND BANKING; MONEY AND FINANCIAL SECTORS; RBI AND MONETARY POLICY)

## FUNDAMENTAL OF ECONOMY (NCERT XI AND XII)

### 1. Micro economy

- ▶ Demand and supply
- ▶ Choices, preferences, utilities
- ▶ Normal, inferior, Luxury, giffen goods
- ▶ Complement, substitute, neutral goods
- ▶ Elasticity of demand
- ▶ Types of input market
- ▶ Types of output market
- ▶ General equilibrium
- ▶ Market failure, Externalities
- ▶ Welfare Economy, Public goods

### 2. Macro economy

- ▶ Aggregate Demand and Aggregate Supply
- ▶ Concepts of National Income
- ▶ Calculation of National Income
- ▶ Purchasing Power Parity on GDP
- ▶ Nominal and real GDP, GDP deflator, etc.
- ▶ Gini Coefficient and Lorenz Curve
- ▶ Inflation: Concept, Causes, Control
- ▶ Inflation Indices
- ▶ Inflation: Impact on Economy, various sectors, etc.
- ▶ Inflation and unemployment

### 3. National Income Accounting of India

- ▶ Latest India's National Income Estimates
- ▶ Calculation of National Income in India

### 4. Money

- ▶ Money: Definition, Types and Functions
- ▶ Demand Supply of Money
- ▶ Indian currency system
- ▶ Broad and Narrow Money
- ▶ Money multiplier
- ▶ Digital Money

- ▶ New Monetary Aggregates
- ▶ Policy Tools to Control Money Supply
- ▶ Liquidity and Inflation

### 5. Banking

- ▶ Development of Banking System in India
- ▶ Types of bank in India
- ▶ RBI Act
- ▶ RBI and its functions
- ▶ Banking Regulation act
- ▶ Banking nationalization
- ▶ Basel norms
- ▶ Non-banking financial institutions
- ▶ Digital money, digital payment system
- ▶ Crypto currency, Block chain Technology, etc.
- ▶ Central bank digital currency
- ▶ Steps for banking reforms
- ▶ Insolvency and bankruptcy

### 6. Monetary Policy

- ▶ Evolution of Monetary policy in India
- ▶ Role of RBI in monetary policy
- ▶ Instruments of Monetary Policy and their impacts
- ▶ Key Interest Rates Policy Rates and Reserve Ratios
- ▶ Role of RBI in debt management
- ▶ Monetary Policy Committee and Inflation Targeting

### 7. Money and Financial Sectors

- ▶ Concept and functions of financial markets
- ▶ Instruments of money market
- ▶ Types of capital market
- ▶ Distinguish between capital market and money market
- ▶ Insurance Industry - Insurance Industry and Reforms
- ▶ Role of regulators viz. SEBI, IRDA, etc.
- ▶ Types and Examples of Bond and securities
- ▶ Stock Exchanges of India



**TEST - 04****FUNDAMENTALS OF ECONOMY-2**

(PUBLIC FINANCE, BUDGETING, FISCAL POLICY; PLANNING AND INCLUSIVE GROWTH; POVERTY AND UNEMPLOYMENT; SECTORS OF ECONOMY (AGRICULTURE, INDUSTRY, SERVICES, AND EXTERNAL SECTORS))

**1. Public Finance and Budgeting**

- ▶ Budget: Definition, Types, Terminologies, Process, etc.
- ▶ Gender budgeting, Green budgeting, Zero-based budgeting, etc.
- ▶ Receipts and expenditure
- ▶ Deficits: Fiscal, Revenue, Effective Revenue, Primary, Monetized, etc.
- ▶ Deficit Financing
- ▶ FRBM Act and amendments

**2. Fiscal Policy**

- ▶ Taxation System in India: Classification, tax rate, effects
- ▶ Various other dimension of Taxation: methods (Progressive, Regressive, proportional, etc.)
- ▶ Fiscal reforms, Fiscal drag
- ▶ Fiscal consolidation
- ▶ Direct Tax code, problems in implementation
- ▶ GST and various dimensions
- ▶ National Anti-Profitsteering Authority
- ▶ Subsidies: Dimensions and Rationalization
- ▶ Financial Stability and Development Council (FSDC)
- ▶ Financial Stability Report
- ▶ Public Debt Management Cell
- ▶ Base Erosion and Profit Shifting
- ▶ Global Minimum Corporate Tax
- ▶ Tax Buoyancy, Tax Avoidance, GAAR
- ▶ Financial Data Management Centre
- ▶ Public Financial Management System
- ▶ Recent trends in Fiscal policy

**3. Poverty**

- ▶ Concept and dimensions of Poverty
- ▶ Measurement and Methodologies to estimate Poverty in India
- ▶ Poverty Line
- ▶ Types and Causes of Poverty
- ▶ Hunger, Malnutrition, Stunting, etc.
- ▶ Multidimensional Poverty in India

**4. Unemployment**

- ▶ Unemployment: Definition and Types
- ▶ Causes of unemployment in India
- ▶ Measurement of Unemployment in India
- ▶ Unemployment Trends in India

**5. Planning and Inclusive Growth**

- ▶ Planning History, Key Five Year Plans, etc.
- ▶ NITI Aayog (Planning aspects)
- ▶ Inclusive Growth: Meaning and Various dimensions
- ▶ Social Sectors and social Infrastructure: Health, Education, and Standard of living
- ▶ Water, Sanitation and Hygiene (WASH)
- ▶ Poverty Alleviation Programs in India
- ▶ Employment Generation Programs in India
- ▶ Human Resource Development, Gender Neutrality, and various other aspects, etc.
- ▶ Key Reports and Indices

**6. Agriculture**

- ▶ Agricultural Inputs: Seeds, Credit structure, Irrigation, etc.
- ▶ Minimum Support Price
- ▶ Agricultural Subsidies
- ▶ Crop Insurance in India
- ▶ Agriculture land reforms
- ▶ Agricultural Outputs: Infrastructure, Marketing reforms, Harvesting, etc
- ▶ Agriculture Price Policy (APP) in India
- ▶ Agri-Market Infrastructure Fund
- ▶ Agriculture Extension
- ▶ FCI, NABARD, etc.
- ▶ Food security in India, Public Distribution System
- ▶ Food processing, Mega Food Park, other dimensions

**7. Industry and Infrastructure**

- ▶ MSMEs sector
- ▶ Make in India
- ▶ Industrial corridors

- ▶ National Mission on Government e-Market (GeM) portal
- ▶ PLI scheme
- ▶ Steps for industrial promotion
- ▶ Recent steps for Infrastructure push
- ▶ National IPR policy
- ▶ National Manufacturing policy
- ▶ Industrial policy
- ▶ National Design policy
- ▶ National Automotive Policy
- ▶ Logistics sector, Portal
- ▶ Dedicated Freight Corridors
- ▶ Special Economic Zone (SEZ)
- ▶ Energy infrastructure
- ▶ National E-Mobility Programme
- ▶ National Investment and Infrastructure Fund
- ▶ Modified Industrial Infrastructure Upgradation Scheme
- ▶ Exchange rate regimes: types, features
- ▶ India's Exchange rate system
- ▶ Depreciation, Appreciation, Devaluation, Revaluation
- ▶ Current Account Convertibility and Capital Account Convertibility
- ▶ NEER and REER
- ▶ Forex Reserves, External Debt
- ▶ Impact of Globalization on Indian Economy
- ▶ International Organizations: IMF, WTO, World Bank Group, ADB, AIIB, NDB, WEF, etc.
- ▶ International Groupings: G20, BRICS, SCO, G7, ASEAN etc.
- ▶ Types of trade agreements (PTA, FTA, CEPA, CECA etc.)
- ▶ WTO: Trips, Trims, India and WTO
- ▶ Foreign Investment Models
- ▶ FDI policy
- ▶ New Foreign Trade Policy
- ▶ Miscellaneous

## 8. Services

- ▶ Size and Structure of the Service sector
- ▶ Champion Services Sectors: Education, Tourism & Hospitality, Information Technology and ITES, Transport and Logistics, Financial, Medical, etc.
- ▶ Trade in Services Sector
- ▶ IPR issues in India, recent trends

## 9. External sectors

- ▶ Balance of Payments and Foreign Capital
- ▶ Trade structure, Balance of Trade

## 10. Recent Development

- ▶ G7 corporate tax
- ▶ National Monetisation Pipeline
- ▶ PM Gati Shakti Master Plan
- ▶ Credit Rating Agencies: Credibility and Accountability
- ▶ Recent trends and measures of banking Reforms
- ▶ Circular Economy
- ▶ Financial Inclusion Index

**TEST - 05**

**CSAT - 1**  
(Reading Comprehension-1)

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**TEST - 06****FUNDAMENTALS OF ENVIRONMENT-1**

(BASIC CONCEPT OF ECOLOGY; ENVIRONMENT AND ITS FACTORS; ECOSYSTEM: STRUCTURE AND FUNCTION; BIODIVERSITY AND THREATS; CONSERVATION METHODS; BIODIVERSITY OF INDIA AND THE WORLD)

**1. Fundamentals of Ecology and Environment**

- ▶ NCERT XII Biology

**2. Basic Concept of Ecology**

- ▶ Definition and Types of Ecology
- ▶ Habitat & Ecological Niche
- ▶ Ecological Principles
- ▶ Levels of Organisation
- ▶ Population ecology
- ▶ Ecological dominance
- ▶ Community Ecology

**3. Environment and its factors**

- ▶ Environment and its Components
- ▶ Factors of Environment
- ▶ Responses to Abiotic Factors
- ▶ Adaptations in animals
- ▶ Adaptations in plants
- ▶ Evolutionary changes and natural selection

**4. Levels of Ecological Organization**

- ▶ Organisms
- ▶ Population
- ▶ Community
- ▶ Ecosystems
- ▶ Biosphere

**5. Ecosystem: Structure and Function**

- ▶ Definitions and terms
- ▶ Components of Ecosystem
- ▶ Productivity and types
- ▶ Decomposition and related terms
- ▶ Energy Flow
- ▶ Food Chain, types
- ▶ Food web
- ▶ Various types of Ecological Pyramid
- ▶ Pollutants and Trophical Level
- ▶ Population Interactions
- ▶ Nutrient Cycle
- ▶ Bio-Geochemical Cycle

- ▶ Ecological Succession: Definition and terms
- ▶ Ecological Succession: types and Process
- ▶ Ecosystem Services
- ▶ Ecotones
- ▶ Threats to Ecosystems
- ▶ Rebounding Ecosystems
- ▶ Biome

**6. Terrestrial Ecosystem**

- ▶ Latitude vs altitude variation
- ▶ Tundra
- ▶ Taiga
- ▶ Grassland
- ▶ Tropical Forest
- ▶ Indian Forest Types
- ▶ Latest ISFR
- ▶ Desertification and control
- ▶ Desert Ecosystem

**7. Aquatic Ecosystem**

- ▶ Ocean and Lake Ecology
- ▶ Eutrophication, Algal bloom
- ▶ Wetlands ecosystem
- ▶ Wetland Conservation Programme, Montreux Record
- ▶ Ramsar sites
- ▶ Estuary
- ▶ Mangrove
- ▶ Coral reefs: structure and function
- ▶ Coral reefs: Threats and conservation

**8. Biodiversity: Concept**

- ▶ Concept and definition
- ▶ Levels of Biodiversity
- ▶ Patterns and Distribution of Biodiversity
- ▶ The importance of Species and Genetic Diversity to the Ecosystem
- ▶ Factors that enhance biodiversity
- ▶ Types of Diversity
- ▶ Endemism: concept
- ▶ Threats to Biodiversity
- ▶ Causes of biodiversity losses

- ▶ Extinction of species, Mass extinction
- ▶ Biopiracy
- ▶ Invasive species
- ▶ Indicator species
- ▶ Keystone species
- ▶ Speciation
- ▶ Evolution

## 9. Conservation Methods and Strategies

- ▶ Utilitarian aspects for conserving biodiversity
- ▶ Methods to conserve Biodiversity
- ▶ Ex situ vs. In situ
- ▶ Biosphere
- ▶ Wildlife Sanctuaries

- ▶ National Parks

## 10. Biodiversity of India and the World

- ▶ Patterns and Distribution of Biodiversity in India
- ▶ Invasive species in India
- ▶ IUCN's Red and Green Status of Species
- ▶ Critically Endangered Species of India and the World
- ▶ Biodiversity Hotspots
- ▶ Biodiversity Coldspots
- ▶ Floral endemism
- ▶ Global Eco-regions
- ▶ Miscellaneous

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## TEST - 07

## FUNDAMENTALS OF ENVIRONMENT-2

(ENVIRONMENTAL POLLUTION AND MANAGEMENT; CLIMATE CHANGE AND MITIGATION; BIODIVERSITY CONSERVATION EFFORTS; ENVIRONMENTAL GOVERNANCE (NATIONAL AND INTERNATIONAL); ENVIRONMENTAL IMPACT ASSESSMENT; RECENT DEVELOPMENTS)

**1. Effect of Human Activities on Environment**

- ▶ Effect of Modern Agriculture on Environment
- ▶ Effect of Housing on Environment
- ▶ Effect of Power Generation on Environment
- ▶ Effect of River Valley Projects (Water Resource Projects) on Environment
- ▶ Effect of Mining on Environment
- ▶ Effect of Transportation Activities on Environment
- ▶ Effect of Tourism on Environment

**2. Water Resource degradation**

- ▶ Water Cycle (Hydrological Cycle)
- ▶ Availability and Quality Aspects (groundwater depletion)
- ▶ Water-borne and Water-induced Diseases
- ▶ Fluoride Problem in Drinking Water
- ▶ Arsenic Problem in Drinking Water

**3. Minerals & Environmental Degradation**

- ▶ Mining and Environment
- ▶ Sensitivity of Select Ecosystems to Mining
- ▶ Impact of Mining
- ▶ Indirect Impact of Mining
- ▶ International Laws on Mining
- ▶ Main Act or Statue to regulate the impact of Indian Mining Sector
- ▶ Sustainable Mining

**4. Deforestation**

- ▶ Causes of Deforestation
- ▶ Implications of Deforestation for Climate Change
- ▶ Consequences of Deforestation on the Wildlife of India
- ▶ Impact of Deforestation on Indian Monsoon
- ▶ Impact of Deforestation on People
- ▶ Deforestation Leads to Water and Soil Resources Loss and Flooding
- ▶ Economical Impacts
- ▶ Strategies for Reducing Deforestation
- ▶ Government Programmes for Conservation of Forests

- ▶ Legislations for Conservation of Forests using People Participation
- ▶ Steps for Improving People Participation in Forest Resource Management
- ▶ Use of Local Traditional Methods

**5. Waste Management**

- ▶ Solid Waste
- ▶ Hazardous Waste
- ▶ e-Waste
- ▶ Bio Medical Waste
- ▶ Plastic Waste
- ▶ Methods for Waste Management
- ▶ Effects of Poor Waste Disposal
- ▶ Landfill

**6. Sustainable Development**

- ▶ Principles of sustainability
- ▶ Measurement of Sustainability or Sustainable Ethics or Equitable Utilisation of Natural Resource
- ▶ Sustainable Lifestyle (Role of an individual in sustainable, development)
- ▶ Challenges to Sustainable Development
- ▶ International Efforts to Achieve Sustainability

**7. Environmental Pollution**

- ▶ Air Pollution
  - ◉ Sources of Air Pollution
  - ◉ Effects of Air Pollution
  - ◉ Classification of Air Pollutant
  - ◉ Control Measures of Air Pollution
  - ◉ Air Pollution Disasters
  - ◉ Long Range Transport of Gaseous Air Pollutants
  - ◉ National Ambient Air Quality Standards
- ▶ Water Pollution
  - ◉ Sources of Water Pollution
  - ◉ Types of Water Pollutants
  - ◉ Effects of Water Pollution
  - ◉ Water Quality Standards
  - ◉ Control of Water Pollution



- ▶ Thermal Pollution
  - Sources of Thermal Pollution
  - Effects of Thermal Pollution
  - Control of Thermal Pollution
- ▶ Soil Pollution or Land Degradation
  - Sources of Soil Pollution
  - Effects of Soil Pollution
  - Control Measures
- ▶ Noise Pollution
- ▶ Air-borne Diseases
- ▶ Toxic Substances: Toxicant, Toxicity and Toxicology
- ▶ Factors affecting toxicity
- ▶ Carcinogens

## 8. Solid Waste Management

- ▶ Sources of Solid Waste
- ▶ Effect of Solid Waste
- ▶ Control Measures of Solid Waste
- ▶ Solid Waste Management Rules
- ▶ Hazardous Waste Management (HWM)

## 9. Coastal ecosystem management

- ▶ Mangroves
  - Salient features of Mangroves
  - Importance of Mangroves
  - Mangroves in India
  - Mangroves under threats
  - Legal and Regulatory Approaches for Protection
- ▶ Estuaries
  - Importance of estuaries
  - Threats to estuaries
- ▶ Coral Reefs
  - Geographical Conditions Required
  - Uses of coral reefs
  - Conservation of coral reef
- ▶ Steps for Coastal Ecosystem Management

## 10. Environmental Impact Assessment

- ▶ Government Body which Executes EIA
- ▶ Environmental Effects Analysed under EIA
- ▶ Process of EIA
- ▶ EIA Ruling 1984

## 11. Environmental Laws

- ▶ Environmental Laws
- ▶ Provisions in the Indian Constitution towards Environmental Protection
- ▶ Salient Features of Air (Prevention and Control of Pollution) Act, 1981\*
- ▶ Salient Features of Water (Prevention and Control of

Pollution) Act, 1974

- ▶ Salient features of Forest Conservation Act, 1980
- ▶ Salient Features of Wildlife Protection Act, 1972
- ▶ Salient Features of Environment (Protection) Act, 1986
- ▶ Role of Government in Environmental Protection

## 12. Environment related Institutions and Organizations

- ▶ Pollution Control Boards
- ▶ National Green Tribunal
- ▶ Forest Survey of India
- ▶ National Board for Wildlife

## 13. Schemes

- ▶ National Mission for Clean Ganga
- ▶ India Signs Global Environment Facility Grant
- ▶ Wood in Good Campaign
- ▶ Boat Lab to Study Brahmaputra
- ▶ Wildlife Action Plan
- ▶ SECURE Himalayas
- ▶ Strategic Plan for Human-Elephant Conflict
- ▶ Save the Sparrow
- ▶ Land Degradation Neutrality
- ▶ Biodiversity Heritage Site - Ameenpur Lake
- ▶ Energy Conservation Building Code
- ▶ Special Protection Force for Rhinos
- ▶ Regional Project on Stubble Burning
- ▶ Blue Flag Pilot Project
- ▶ National Afforestation Program
- ▶ National River Conservation Plan
- ▶ National Mission for Clean Ganga
- ▶ National Air Quality Index (AQI)
- ▶ National Action Programme to Combat Desertification
- ▶ Bharat Stage Norms

## 14. International Environmental Governance

- ▶ UNEP
- ▶ UNDP
- ▶ Centre for Biological Diversity
- ▶ WWF for Nature
- ▶ IUCN - Red List
- ▶ Birdlife International
- ▶ International Conventions / Protocols & their Objectives

## 15. Urbanization and climate

- ▶ Pollution in metros and climate change
- ▶ Real estate boom and environment degradation

- ▶ Urban Heat Island
- ▶ Polythene bags and pollution
- ▶ Methane generation from waste

**16. Impact of agriculture on climate**

- ▶ Agriculture increases Carbon Dioxide Emissions
- ▶ Monoculture practice impacts biodiversity
- ▶ Pollution due to use of chemical fertilizers
- ▶ Soil-related effects
- ▶ Fertilizer's Effect on the Environment
- ▶ Impact of livestock on environment
- ▶ Impact of use of Pesticides on environment

- ▶ Impact of GM crop on environment
- ▶ Emission of Methane from agricultural practices
- ▶ Sustainable Agriculture Techniques

**17. Global Warming & Health**

- ▶ Health impacts of global warming
- ▶ Mosquito-borne diseases
- ▶ Ozone depletion and human health

**TEST - 08****CURRENT AFFAIRS-1****(MAY TO AUGUST, 2024)**

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## TEST - 09

## FUNDAMENTALS OF HISTORY - 1

(ANCIENT HISTORY: POLITICAL STRUCTURE OF ANCIENT INDIA; ECONOMIC CONDITIONS OF ANCIENT INDIA; SOCIO-CULTURAL DEVELOPMENT OF ANCIENT INDIA;  
 MEDIEVAL HISTORY: POLITICAL STRUCTURE OF MEDIEVAL INDIA; ECONOMIC CONDITIONS OF MEDIEVAL INDIA;  
 SOCIO-CULTURAL DEVELOPMENT OF MEDIEVAL INDIA)

**1. Political Structure of Ancient India**

- ▶ Pre-Historic Times
- ▶ Indus Valley Civilization
- ▶ Rig Vedic and Later Vedic Period
- ▶ Mahajanapadas Period
- ▶ Mauryan Empire
- ▶ Post-Mauryan India
- ▶ Gupta Period
- ▶ Harshavardhan
- ▶ Sangam Period

**2. Economic Conditions of Ancient India**

- ▶ Stone Age
- ▶ Copper-Bronze Age
- ▶ Iron Age
- ▶ Mahajanapadas period
- ▶ Mauryan Empire
- ▶ Post-Mauryan India
- ▶ Gupta's Era
- ▶ Post-Gupta Era
- ▶ Economic Conditions of the early South

**3. Socio-cultural development of Ancient India**

- ▶ Socio-cultural life of Stone Age
- ▶ Indus Valley Civilization
- ▶ From Varna system to Caste System
- ▶ Buddhism and Jainism, other strands if Indian religious movement
- ▶ Indian School of Philosophy
- ▶ Scientific development in ancient India

- ▶ Emergence of Bhakti Movement in South India
- ▶ Emergence of Bhagwatism, expansion of casteism during Gupta Era
- ▶ Emergence and Growth of Feudalism in Ancient India

**4. Political Structure of Medieval India**

- ▶ Tripartite Struggle in North India
- ▶ Cholas and other South Indian Kingdoms
- ▶ Early Muslim Invasions
- ▶ Delhi Sultanate
- ▶ Mughal Empire
- ▶ Deccan Kingdoms
- ▶ Vijayanagara Empire
- ▶ Marathas and other Indian States

**5. Economic Conditions of Medieval India**

- ▶ Economic Condition and Reform in Sultanate Period
- ▶ Economic Life during Mughal Period
- ▶ Economic Life of Regional States in India
- ▶ Economic life of South India
- ▶ Economic Life during Marathas

**6. Socio-cultural development of Medieval India**

- ▶ Caste System and Feudalism in Medieval India
- ▶ Emergence and Spread of Islam and its impact
- ▶ Bhakti and Sufi Movements
- ▶ Scientific development in Medieval India

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## TEST - 10

## FUNDAMENTALS OF HISTORY - 2

(MODERN HISTORY: INDIA FROM EARLY 18TH CENTURY TO THE 19TH CENTURY; BEGINNING OF INDIA'S STRUGGLE FOR FREEDOM; INDIA'S FREEDOM MOVEMENT IN THE 20TH CENTURY; INDIA UNDER THE BRITISH RULE)

### 1. India from Early 18<sup>th</sup> Century to the 19<sup>th</sup> century

- ▶ Social, Economic, and Political structure of the 18<sup>th</sup> and the first half of the 19<sup>th</sup> Century India
- ▶ Crisis of Mughal Empire, Nadir Shah Invasion, and Weakening of the North-West
- ▶ Succession states, Regional states, and new states of the 18<sup>th</sup> Century
- ▶ Advent of Europeans in India
- ▶ British supremacy over Other Colonial powers and Indian powers
- ▶ British Expansion and Consolidation in India:
  - Carnatic Wars
  - Rise and fall of Mysore, Anglo-Mysore Wars
  - Rise and fall of Marathas, Anglo-Maratha Wars
  - Conquest of Bengal: Battles of Plassey and Buxar
- ▶ Governor Generalship, Subsidiary Alliance, and Doctrine of Lapse
- ▶ British Administration before 1857
- ▶ Economic Policies of the British
- ▶ Impact of British Administration on Social, Cultural, and Political and Economic lives of the Indians

### 2. Beginning of India's Struggle for Freedom

- ▶ Social Reform Movements and Personalities
- ▶ Revolt of 1857
- ▶ Peasant, Tribal and Civil Movements
- ▶ Administrative Changes after 1857
- ▶ Early Political Organizations for Freedom
- ▶ Formation of Indian National Congress and early Methods & Achievements
- ▶ Important Viceroys and their activities
- ▶ Important Personalities

### 3. India's freedom movement in the 20th Century

- ▶ Rise of Extremism during Indian National Movement

- ▶ Difference between Moderates and Extremists
- ▶ Surat Split
- ▶ Muslim League
- ▶ Morley Minto reforms
- ▶ Gahdar Movement
- ▶ Lucknow Pact
- ▶ Home Rule Leagues
- ▶ August Declaration of 1917
- ▶ Montagu-Chelmsford Reforms
- ▶ Revolutionary Nationalism and Personalities, HRA, HSRA, Bengal Armory Raid, etc.
- ▶ Beginning of Gandhian Era
  - Early movements
  - Rowlatt Act and Satyagraha
  - Jallianwala Bagh massacre and Reactions
  - Non-Cooperation Movement
  - Khilafat Movement
  - Congress-Khilafat Swaraj Party
  - Gandhi Irwin Pact
  - Lahore Resolution
  - Karachi Resolution
  - Civil Disobedience Movement
  - Poona Pact
  - August Offer
  - Individual satyagraha
  - Cripps Proposals and Reaction
  - Quit India Movement
  - Wavell Plan and Shimla Conference
  - C R Formula or Rajaji Formula
  - Cabinet Mission Plan
- ▶ Important Personalities
- ▶ Governor-Generals and Viceroys

### 4. India under the British rule

- ▶ Development of Modern Education
- ▶ Development of Press
- ▶ Important Peasants Movements and Organizations
- ▶ Important Workers Movements and Organizations

- ▶ Important Caste Movements and Organizations
- ▶ Economic Impact of British Rule, Economic Drain Theory
- ▶ Industrial policy of British in India, Development of Modern Industry
- ▶ Role of Women in Freedom Movement and Women's Associations
- ▶ Rise of Communalism in India
- ▶ Rise of Communism and Socialism
- ▶ Nationalists' response to the First World War
- ▶ Nationalist movement in princely states
- ▶ Nehru Report and Reactions
- ▶ Government of India Act, 1935
- ▶ 1937 Indian provincial elections, Formation and Resignation of Congress Ministry
- ▶ Nationalists' response to the Second World War
- ▶ Indian National Army, INA trials and Reactions
- ▶ Indian Independence with Partition

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**TEST - 11****FUNDAMENTALS OF HISTORY - 3**

(ART & CULTURE: ARCHITECTURE & SCULPTURES; RELIGION, LANGUAGE & LITERATURE; PAINTINGS, POTTERY AND NUMISMATIC; DANCE, DRAMA AND MUSIC; INDIAN THEATRE AND PUPPETRY; SPORTS; RECENT DEVELOPMENTS)

**1. Architecture & Sculptures**

- ▶ Architecture of Indus Civilization
- ▶ Buddhist Architecture
- ▶ Cave Architecture
- ▶ Gandhara Art
- ▶ Mathura Art
- ▶ Indo-Saracenic architecture
- ▶ Mauryan and Post Mauryan Architecture
- ▶ Temple Architecture
- ▶ Various dimensions of Nagara Style
- ▶ Various dimensions of Dravida Style
- ▶ Pallava and Chola Period
- ▶ Vesara Style
- ▶ Indo-Islamic Architecture: Delhi sultanate
- ▶ Indo-Islamic Architecture: Provincial style
- ▶ Indo-Islamic Architecture: Mughal School
- ▶ Rajput school of Architecture
- ▶ Modern Architecture and Sculpture
- ▶ Sculptures of Harappan Civilization
- ▶ Sculptures of Mauryan and Post-Mauryan Age
- ▶ Jain Sculptures
- ▶ Buddhist Sculpture
- ▶ Gupta Sculpture
- ▶ Medieval School of Sculpture
- ▶ Bronze Sculpture
- ▶ Satvahana Sculptures

**2. Religion**

- ▶ Buddhism
- ▶ Jainism
- ▶ Lingayats
- ▶ Sikhism
- ▶ Sufi Silsilah
- ▶ Hinduism
- ▶ Schools of Philosophy
- ▶ Buddhist Philosophy
- ▶ Personalities
- ▶ Paticca-Samuppada
- ▶ Vajrayana Buddhism

**3. Language & Literature**

- ▶ Vedic literature
- ▶ Brahmanas and Aranyakas
- ▶ Budhhist literature
- ▶ Jain literature
- ▶ Vinaya Pitaka
- ▶ Sangam Literature
- ▶ Literature during Gupta's era
- ▶ Literature during medieval period
- ▶ Literature during modern period
- ▶ Literature during freedom movement
- ▶ Secular Sanskrit literature
- ▶ Scientific development in medieval India
- ▶ International Memory of the World Register by UNESCO
- ▶ Manuscripts

**4. Miscellaneous**

- ▶ Festivals of India
- ▶ UNESCO's List of Intangible Cultural Heritage
- ▶ UNESCO's List of Tangible Cultural Heritage
- ▶ UNESCO Records

**5. Paintings**

- ▶ Ancient Rock Painting
- ▶ Mural Paintings in India, Buddhist Painting
- ▶ Pala School of miniature
- ▶ Mughal School of miniature
- ▶ Paintings in the Deccan
- ▶ Rajput School of Painting
- ▶ Pahari School of Painting
- ▶ Miniature Painting in South India
- ▶ Modern Paintings

**6. Pottery and Numismatic**

- ▶ Pottery tradition of India
- ▶ Coinage systems in Ancient India
- ▶ Coinage systems in Medieval India

**7. Dance, Drama and Music**

- ▶ Concept of Dance in India, and their texts
- ▶ Classical dances
- ▶ Folk Dances of India
- ▶ Hindustani Classical Music
- ▶ Carnatic music
- ▶ Musical Instruments
- ▶ Folk Music and songs

**8. Indian Theatre and Puppetry**

- ▶ Classical Sanskrit Theatre
- ▶ Regional Theatre
- ▶ Modern Theatre
- ▶ Puppetry of India
- ▶ Modern Puppetry

- ▶ Tribal Puppetry

**9. Sports**

- ▶ Regional Martial arts

**10. Recent Developments**

- ▶ "Life in Miniature' Project'
- ▶ Temples in news
- ▶ Schemes related to Art and Culture
- ▶ 'Iconic' archaeological Sites
- ▶ Archaeological Sites in news
- ▶ Tulu Language
- ▶ Rogan art
- ▶ Jagannath temple Heritage Corridor Project

**TEST - 12****CSAT -02****(Quantitative Aptitude - 1)**

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**TEST - 13**

03 DECEMBER,  
2023

**FUNDAMENTALS OF GEOGRAPHY-1**

(GENERAL GEOGRAPHY: ORIGIN OF UNIVERSE, SOLAR SYSTEM, EVOLUTION OF EARTH, EARTH'S INTERIOR, ROCKS AND MINERALS; GEOMORPHOLOGY: ENDOGENIC AND EXOGENIC FACTORS AND PROCESSES, LANDFORMS AND THEIR EVOLUTIONS; CLIMATOLOGY AND OCEANOGRAPHY)

**1. Fundamental of Geography of India and the World**

- ▶ NCERT XI and XII

**2. General Geography**

- ▶ Geological Time Scale
- ▶ Origin of universe: various theories
- ▶ Origin of stars
- ▶ Origin and evolution of Sun
- ▶ Sun: Structure, features
- ▶ Solar storms, Magnetism, Auroras
- ▶ Solar system
- ▶ Planet formations
- ▶ Origin and evolution of Earth
- ▶ Origin of life on earth
- ▶ Moon, its origin, influence on earth
- ▶ Non-planetary celestial bodies
- ▶ Miscellaneous
- ▶ Kuiper belt
- ▶ Goldilocks zone
- ▶ Circumstellar habitable zone
- ▶ Interstellar space

**3. Earth's Interior**

- ▶ Sources of information about the interior of Earth
- ▶ Earth's structure (interior)
- ▶ Crust
- ▶ Mantle
- ▶ Earth Cores
- ▶ Various Discontinuity
- ▶ Lithosphere
- ▶ Magma Formation
- ▶ Earthquake: Causes, types, effects
- ▶ Earthquake Waves
- ▶ Measuring Earthquakes
- ▶ Volcanism

- ▶ Volcanic materials
- ▶ Volcanic landforms: Intrusive Forms and Extrusive Forms

**4. Distribution of Oceans and Continents**

- ▶ Continental Crust and Oceanic crust
- ▶ Continental drift theory, and Evidences
- ▶ Post-drift Studies: Convectional Current Theory and Ocean Floor mapping
- ▶ Concept of sea floor spreading
- ▶ Plate Tectonics: Theory and evidences
- ▶ Plates of the world
- ▶ Types of plate boundaries: Theory, features
- ▶ Types of plate boundaries: Examples
- ▶ Distribution of earthquake and volcanoes
- ▶ Rate and Force for the Plate Movement
- ▶ Indian plate

**5. Rocks and Minerals**

- ▶ Rocks: types, examples
- ▶ Rock cycle
- ▶ Mineral: Types, examples
- ▶ Mineral: Rocks

**6. Geomorphic Processes**

- ▶ Agents of Geomorphic Processes
- ▶ Endogenic processes
- ▶ Orogenic process
- ▶ Folding
- ▶ Faulting
- ▶ Epeirogenic process
- ▶ Mass Wasting
- ▶ Exogenic processes
- ▶ Weathering: features, agents
- ▶ Weathering: Effects and significances
- ▶ Weathering: types
- ▶ Soil profile

- ▶ Process of Soil Formation
- ▶ Factors of Soil Formation

## 7. Landforms and their Evolutions

- ▶ Fluvial landforms
- ▶ Landforms by Groundwater
- ▶ Glacial Landforms
- ▶ Aeolian Landforms
- ▶ Coastal Landforms

## 8. Climatology

- ▶ Composition of Air
- ▶ Structure of atmosphere
- ▶ Solar Radiation Heat Balance, Heat budget
- ▶ Insolation, Variability of Insolation at the surface of the Earth, Albedo
- ▶ Rotation on Axis , Angle of Inclination of sun rays , Length of the day
- ▶ Reason of the season
- ▶ Heating and cooling of atmosphere
- ▶ Terrestrial Radiation, Shortwave Radiation, Long wave Earth Radiation
- ▶ Factors controlling Temp distribution, Inversion of Temperature, impact
- ▶ 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
- ▶ Atmospheric Circulation and Weather Systems
- ▶ Latitudinal Variation of Atmospheric Heating
- ▶ Pressure Belts, Migration of Belts Following apparent Path of Sun
- ▶ Global Circulation – Hadley Cell, Ferrel Cell
- ▶ Pattern of Planetary Winds
- ▶ Seasonal Wind, Local Wind, Land and Sea Breezes, Mountain and Valley Winds
- ▶ Air mass & fronts, Important Streams (Jets), Local streams, and their impacts
- ▶ Tropical Cyclone
- ▶ Extra Tropical Cyclone
- ▶ Water in the Atmosphere, Water Vapour, variation, Humidity – Absolute and Relative
- ▶ Precipitation, Saturation
- ▶ Dew Point, Evaporation and Condensation
- ▶ Dew, Frost, Fog & Mist, snowfall etc
- ▶ Clouds: formation, types,
- ▶ Precipitation: Rainfall, Snowfall, Sleet Hail,

Hailstones

- ▶ Types of Rainfall
- ▶ The Hot, Wet Equatorial Climate, vegetation
- ▶ The Tropical Monsoon and Tropical Marine Climates, vegetation
- ▶ The Savanna or Sudan Climate, grassland
- ▶ The Hot Desert and Mid-Latitude Desert Climates, vegetation
- ▶ The Warm Temperate Western Margin (Mediterranean) Climate, vegetation
- ▶ The Temperate Continental (Steppe Climate), grasslands
- ▶ The Warm Temperate Eastern Margin (China Type Climate), vegetation
- ▶ The Cool Temperate Western Margin (British Type Climate), vegetation, The Cool Temperate Continental (Siberian) Climate, vegetation
- ▶ The Cool Temperate Eastern Margin (Laurentian) Climate, vegetation
- ▶ The Arctic or Polar Climate, vegetation
- ▶ Forestry: Social forestry, Agro-forestry, Farm Forestry, Community Forestry

## 9. Oceanography

- ▶ Relief of the Ocean floor: major and minor
- ▶ Divisions of the ocean floor
- ▶ Distribution of salinity, regions, Factors affecting salinity
- ▶ Distribution of Temperature, regions, Factors influencing Temperature distribution
- ▶ Waves: Characteristics, Cause, role in economy
- ▶ Waves: Tsunami
- ▶ Tides: Cause and Effects
- ▶ Tides: types
- ▶ Ocean Currents genesis, features
- ▶ Effects of Ocean Currents Effects on climate, vegetation, temperature distribution
- ▶ Effects of Ocean Currents on economy, major fishing zones of the world
- ▶ Surface currents & Deep water currents based on Depth
- ▶ Cold and Warm Currents based on Temperature
- ▶ Major Ocean currents of the World
- ▶ Oceanic gyres
- ▶ Coral Reef: Fringing Reef, Barrier Reef & Atoll
- ▶ Marginal seas of the world: Bay, Gulf, Strait, Isthmus

## TEST - 14

## FUNDAMENTALS OF GEOGRAPHY - 2

(GEOGRAPHY OF INDIA: LOCATION, PHYSIOGRAPHY AND DRAINAGE SYSTEM OF INDIA; CLIMATE AND BIOGEOGRAPHY OF INDIA)

### 1. Location of India

- ▶ Latitude, longitude, of India
- ▶ Geographical extremes of India
- ▶ India and its Neighbors
- ▶ Key Channels, Straits of the Indian Ocean

### 2. Physiography of India

- ▶ Geological Divisions
- ▶ Physiographic Divisions
- ▶ Historiography of Indian Plate movement
- ▶ Peninsular Block
- ▶ Formations of Himalayas
- ▶ Division of Himalayas
- ▶ Peaks, passes, glaciers
- ▶ Faults of Himalayas
- ▶ Northern plains: features
- ▶ Northern plains: Division
- ▶ Peninsular Plateau: Features
- ▶ Peninsular Plateau: Division
- ▶ Peninsular Plateau: Location, peaks, pass, etc.
- ▶ Indian Desert
- ▶ Coastal Plains
- ▶ Islands of India

### 3. Drainage System of India

- ▶ Evolution of drainage system of Himalayas
- ▶ Evolution of drainage system of Peninsular India
- ▶ Indus River system
- ▶ Ganga River System
- ▶ Brahmaputra river system
- ▶ Other rivers of Northeast
- ▶ Peninsular Rivers Flowing towards the East
- ▶ Peninsular Rivers Flowing towards the West
- ▶ Narmada and tributaries
- ▶ Krishna and tributaries
- ▶ Kaveri and tributaries
- ▶ Yamuna and tributaries
- ▶ Rivers of Central India
- ▶ Rivers of West India
- ▶ Famous cities on the banks

- ▶ Key River projects, bridges

### 4. Climate of India

- ▶ Seasonal rhythm
- ▶ Koppen's Climatic classification
- ▶ Factors Determining the Climate of India
- ▶ Mechanism of Weather in the Winter Season
- ▶ Mechanism of Weather in the Summer Season
- ▶ Monsoon: Features, location, extent, etc.
- ▶ Monsoon: Causative Factors
- ▶ Monsoon: Influencing Factors
- ▶ Mechanism of the Monsoon
- ▶ South-West Monsoon
- ▶ Retreating Monsoon
- ▶ North-East Monsoon
- ▶ Impact of tropical cyclones on India
- ▶ Spatio-temporal Distribution of Tropical Cyclone in India
- ▶ Impact of Temperate cyclones and western disturbances on India
- ▶ Climatic Regions of India
- ▶ Distribution of Rainfall
- ▶ El-Nino and La-Nina
- ▶ Indian Droughts and Floods
- ▶ Monsoons and the Economic Life in India
- ▶ Landslides, glacial outbursts

### 5. Biogeography of India

- ▶ Soils of India: Types
- ▶ Soils of India: Features
- ▶ Soil Acidity, textures, ingredients
- ▶ Soil Erosion in India
- ▶ Soil Conservation efforts
- ▶ Types of Forests in India
- ▶ Forests: location
- ▶ Forests: features
- ▶ Forest Cover in India



## TEST - 15

## FUNDAMENTALS OF GEOGRAPHY - 3

(HUMAN AND ECONOMIC GEOGRAPHY OF INDIA AND THE WORLD; BIOGEOGRAPHY OF THE WORLD; RECENT DEVELOPMENTS)

### 1. Human Geography of India and the World

- ▶ Nature of Human geography
- ▶ Population growth
- ▶ Migrants, and Refugees in India
- ▶ Demographic transition theory
- ▶ Human Development, human development index (HDI), MPI, etc.
- ▶ Characteristics of population: Age composition, Population pyramids, Sex composition, Literacy
- ▶ Population Policies of India
- ▶ Various types of rural settlements
- ▶ Urbanization, Issues of Urbanization in India
- ▶ Urban settlements: types; Morphology of urban settlements
- ▶ Urban Transportation, recent programmes
- ▶ Rural-urban fringe
- ▶ Census Terminologies

### 2. Economic Geography of India and the World

- ▶ Types of Agriculture, Co-operative and collective Farming
- ▶ Climatic conditions of some crops
- ▶ Cultivation methods, intercropping
- ▶ Breeds of some crops
- ▶ Water resources of India
- ▶ Livestock Census of India: Recent Reports
- ▶ State wise Livestock products
- ▶ World Agricultural: producers, locations
- ▶ Cultivation of GM Crops
- ▶ Methods of Mining
- ▶ Mineral resources: Iron of the world
- ▶ Iron Resources in India and production
- ▶ Bauxite Resources in India and production
- ▶ Graphite, and lithium Resources in India and production
- ▶ Rare Earths metals: features and reserves in India and the world
- ▶ Uranium and Thorium reserves in India
- ▶ Countries with the largest oil reserves and production
- ▶ Countries with the largest coal reserves and production
- ▶ India: Energy resources

- ▶ Coal-bed Methane, Gas Hydrates, Shale Oil/ Shale Gas
- ▶ Biofuels, 2G Ethanol Programme
- ▶ Electricity, Generation, capacity
- ▶ Hydropower projects, thermal projects
- ▶ Renewable energy resources
- ▶ Factors influencing industrial locations
- ▶ Industrial Regions of the world
- ▶ Some key industries of India
- ▶ Tertiary and Quaternary Activities, quinary activities
- ▶ National highways, transport corridors
- ▶ Railways of India
- ▶ Ports of India
- ▶ National Waterways

### 3. Biogeography

- ▶ Soils around the World
- ▶ Soil Acidity, textures, ingredients
- ▶ Soil Erosion
- ▶ Soil Conservation
- ▶ Forest Types
- ▶ Forest around the World
- ▶ Biogeochemical Cycles
- ▶ Major World Biomes

### 4. Recent Developments

- ▶ Rates of desertification of Indian states esp. North Eastern states
- ▶ Transition to Climate-Smart Crops
- ▶ Marine heat waves
- ▶ Atlantic Meridional Overturning Circulation (AMOC)
- ▶ Lithium Reserves in India
- ▶ East African Rift system, breaking away with Madagascar
- ▶ India Cooling action plan
- ▶ Climate Vulnerability Map of India
- ▶ Bamboonomics
- ▶ Miyawaki Method
- ▶ Minerals found in arctic permafrost
- ▶ Rice knowledge Bank
- ▶ Global Agriculture and food security programme

**TEST - 16****FUNDAMENTALS OF SCIENCE  
AND TECHNOLOGY-1**

(FUNDAMENTALS OF PHYSICS, CHEMISTRY, AND  
BIOLOGY & THEIR APPLICATION IN DAILY LIFE; HEALTH  
AND DISEASES; BIOTECHNOLOGY AND APPLICATIONS;  
NUCLEAR ENERGY AND TECHNOLOGY)

**1. Fundamentals of Physics**

- ▶ Properties of fundamental particles
- ▶ Fundamental forces
- ▶ Energy and its various types
- ▶ Fundamental Optics
- ▶ Electromagnetic spectrum
- ▶ Laws and theories in physics, Relativity
- ▶ Electromagnetism
- ▶ Heat and thermodynamics
- ▶ Waves
- ▶ Mechanical
- ▶ Electromagnetic waves
- ▶ Universe
  - Planets, stars, and galaxies
  - Big-bang theory and singularity
  - Dark matter and energy
  - Black holes
  - Neutrino Observatory
  - Gravitational Waves
  - Sunspot
  - Magnetars and Neutron stars
  - Sub-atomic particles

**2. Fundamentals of Chemistry**

- ▶ Elements and molecules
- ▶ States of Matters
- ▶ Atomic structure
- ▶ Chemical bonding
- ▶ Metals and non-metals
- ▶ Metallurgy
- ▶ Acid and base
- ▶ Applications of electrochemistry (Battery and Charging devices)
- ▶ Properties of solution
- ▶ Chemicals in everyday life
- ▶ Polymers and Biopolymers
- ▶ Chemistry of Pharmaceuticals
- ▶ Carbon and its allotropes
- ▶ Hydrocarbons and their derivatives
- ▶ Biomolecules

- ▶ Vitamins and Enzymes

**3. Fundamentals of Biology**

- ▶ Chemical Building Blocks of Life
- ▶ History and Origin of Life
- ▶ Diversity of Living Things
  - Classification and Domains of Life
  - Viruses
  - Prokaryotes
  - Eukaryotes
  - Protists
  - Plants
  - Fungi
  - Animals
- ▶ Evolution
  - Evolution of Life
  - Human Evolution
- ▶ Genetics
  - Inheritance
  - DNA and RNA
  - Gene Expression
  - Gene Regulation
  - Mutation
- ▶ Cells
  - Cell Structure
  - Membranes
  - Cell-Cell Interactions
  - Respiration
  - Energy and Metabolism
  - Cells Division
- ▶ Tissues
  - Epithelial tissue
  - Connective tissue
  - Muscle tissue
  - Nervous
  - Myocardial
  - Hepatic
- ▶ Organ system and Human physiology
  - Endocrine System
  - Respiratory system

- Circulatory system
- Skeletal and Muscular Systems
- Reproduction
- Excretion, Osmoregulation and Thermoregulation
- The Digestive System
- Immune system
- ▶ Nutrition
  - Classification by Source of Energy and Carbon
  - Plant Nutrition
  - Animal Nutrition
  - Human Diet
- ▶ Plant physiology
  - Photosynthesis
  - Respiration
  - Plant-water balance
  - Reproduction
- ▶ Economic Zoology
  - Microbes in Human Welfare
  - Beneficial animals
  - Beneficial insects
- ▶ Economic botany
  - Family of angiosperms
  - Tissue culture
  - Grafting
  - Horticulture

#### 4. Imaging techniques

- ▶ CT scan
- ▶ Magnetic resonance imaging
- ▶ Positron emission tomography (PET)

#### 5. Biological fuel generation

- ▶ Generation and significance of fossil fuels
- ▶ Biofuels from biomass
- ▶ Biodiesel
- ▶ Natural gas and petroleum
- ▶ Hydrogen

#### 6. Health and Diseases

- ▶ Human Diseases
  - Common diseases in human and their causative agents
  - Diseases due to nutrient deficiency
  - Molecular biology and human disease
  - Chromosomal inheritance and disease
  - Extra chromosomal inheritance and disease
  - Vector borne diseases

- Water borne diseases
- Lifestyle diseases
- ▶ Immunity and its types
- ▶ Vaccination and Immunisation
- ▶ Vaccination program of India
- ▶ Medicines
  - Antibiotics
  - Antiviral and antifungal drugs
  - Monoclonal antibodies therapy
  - Antimicrobial drug resistance
  - Drug formulations
  - Drug pricing in India
  - Pharmacogenetics

#### 7. Biotechnology and applications

- ▶ Genetic engineering, process, and application
- ▶ Genomics
- ▶ Proteomics
- ▶ RNA types and technology
- ▶ Genome sequencing and its applications
- ▶ Application of biotechnology in Environment
  - Bio composting
  - Bioremediation
  - Microbial remediation
  - Carbon capture Technology
- ▶ Plant biotechnology
  - Transgenic plants
  - Methods and application of Plant biotechnology
- ▶ Animal biotechnology
  - Transgenic animals
  - Methods and application of Animal biotechnology
- ▶ Application of Biotechnology in Food and beverage industry
  - Bioprocessing
  - Bioreactors
  - Manipulation of Enzymes
  - Food processing
  - Single cell protein
  - Food fortification
- ▶ Application of Biotechnology in agriculture
  - GM technology
  - GM crops
  - Pest Resistant Plants
- ▶ Biotechnology and medicine
  - Gene Editing
  - Gene therapy
  - Molecular Diagnosis
    - PCR

- ELISA
- Antibody-Antigen interactions and detections
- Embryo transfer technology
- Stem cells and their engineering
- Biopharmaceuticals/therapeutic proteins
- Brain fingerprinting technology
- ▶ Bioethics and Biopiracy
- ▶ Biosafety protocols
- ▶ IPR in Biotechnology
- ▶ Recent trends in biotechnology and applied biotechnology

### 8. Nuclear energy and Technology

- ▶ Types of nuclear reactions

- ▶ Nuclear Energy and its application
  - Civil and military applications of Nuclear Energy
- ▶ Nuclear fuels and centrifugation
- ▶ Nuclear Reactor
- ▶ Nuclear Policy of India
- ▶ Nuclear Radiation and its impact
- ▶ Radioactive Waste
- ▶ Nuclear & Radiological Disasters
- ▶ Institutions involved in nuclear energy Development
  - Department of Atomic Energy
  - Atomic Energy Regulatory Board
  - Bhabha Atomic Research Centre
  - Indira Gandhi Centre for Atomic Research

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## TEST - 17

## FUNDAMENTALS OF SCIENCE AND TECHNOLOGY-2

(SPACE SCIENCE AND TECHNOLOGY; DEFENSE TECHNOLOGY AND DEFENSE EXERCISES; NANOTECHNOLOGY AND ITS APPLICATION; IT, ELECTRONICS AND COMMUNICATIONS; AI AND ROBOTICS; INTELLECTUAL PROPERTY RIGHTS AND RECENT DEVELOPMENTS)

### 1. Space

- ▶ Types of orbits
- ▶ Types of Launch Vehicles and application
- ▶ Space missions of key space agencies
  - NASA
  - ISRO
  - ESA
  - ROSCOSMOS
  - JAXA
  - CNSA
- ▶ ISRO and its role in national development
- ▶ Private sector in space
- ▶ Public-private partnership in space sector
- ▶ Space technology
  - Cryogenics
  - Nanosatellites
  - Electric Propulsion
  - Aviation Internet, Starlink communication
  - Satellite communications
  - Remote sensing and its applications
  - Ground Segment-As-A-Service
  - Green Propellant
  - Deep Space Atomic Clock
- ▶ Strategic dimensions
  - Space weapons
  - A-SAT technology
  - Laser technology
  - HGV technology
- ▶ International space collaboration
- ▶ Various space observatories
- ▶ Various telemetry
- ▶ Navigation
  - Global Positioning System
  - Galileo
  - GLONASS
  - IRNSS
- ▶ Geopolitics of outer space

### 2. Defence

- ▶ Missile system and classification
- ▶ Ballistics and cruise missile
- ▶ India's Missile System
- ▶ Integrated guided missile program
- ▶ Missile defence programmes
- ▶ Defence Technology
  - Application of robotics in defence sector
  - Application of AI in defence
  - Internet of Military Things (IoMT)
  - Cyber warfare, and preparedness
  - Drone technology
  - Unmanned Aerial Vehicle
  - Stealth technology
  - Advanced Defense Equipment
  - Air Defence system
  - 3-D printing missiles
  - Lethal Autonomous Weapons
  - Hypersonic technology
    - Hypersonic glide vehicles
    - Hypersonic cruise missiles
- ▶ Weapon system
  - Classical weapons
  - Weapon of mass destruction
    - Fission and fusion bombs
    - Chemical Weapons
    - Biological Weapons
  - Directed Energy Weapons
- ▶ Defence reforms
  - CDS
  - Various committees and recommendations
- ▶ Domains of warfare
- ▶ Defence platforms
  - Submarine
  - Aircraft carrier
  - Combat aircraft
- ▶ Defence Organizations and laboratories
- ▶ Defence Exercises



### 3. Nanotechnology and its application

- ▶ Basics of Nan science and Nanotechnology
- ▶ Nanomaterial
- ▶ Applications of nanotechnology
  - Nano medicine
  - Semiconductors and computing
  - Food
  - Textiles
  - Sustainable energy
  - Environment
  - Transport
  - Space
  - Agriculture
- ▶ Impacts of Nanotechnology
  - Adverse Health and Environmental
  - Social and Ethical Impacts
- ▶ Nano-science and nano-technology in India

### 4. IT, Electronics and Telecommunications

- ▶ Computers
  - Generation of computers
  - Computer terminologies
  - Supercomputer and its applications
  - Cloud computing
- ▶ Information technology
  - Components of IT
  - IT enabled services
  - Application of IT
- ▶ Display technologies
  - Cathode ray
  - LCD
  - LED
  - Plasma Monitors
  - OLED
  - AMOLED
- ▶ Mobile generations
- ▶ Smartphone
- ▶ Net Neutrality
- ▶ Internet of Things
- ▶ Big Data Initiative and Privacy
- ▶ Cyber-crime and security
- ▶ Government initiatives

### 5. Robotics and AI

- ▶ Robotics
  - Machine vs Computer vs Robots
  - Parts of a Robot

- Classification of Robots
- Advantages and Disadvantages of Robot
- Applications of Robotics in Agriculture, industry, defence, etc.
- ▶ AI
  - Neural networks
  - Machine Learning and Deep learning
  - Application of AI
- ▶ Artificial Intelligence and Robotics

### 6. IPR

- ▶ What are Intellectual property rights (IPR)?
- ▶ Types of Intellectual Property Rights
- ▶ International Agreements and institutions on IPR
- ▶ IPR Regime in India
- ▶ National Intellectual Property Rights Policy

### 7. Miscellaneous

- ▶ India's policy in the field of the science and technology
- ▶ Various policies for S&T
- ▶ Institutional structure
  - Department of Science & Technology
  - CSIR
  - Science and Engineering Research Board
  - Technology Development Board
  - National Accreditation Board For Testing And Calibration Laboratories
- ▶ Science and technology as a source of Human Resource Development
- ▶ Awards related to Science
- ▶ India and global collaboration in science projects
- ▶ Technology Vision Document 2035

### 8. Recent Developments

- ▶ Deepfakes
- ▶ Web 3.0
- ▶ Indian Space Association
- ▶ National Policy for Rare Diseases
- ▶ Deep Sea Mission
- ▶ Desalination plants
- ▶ Digital geological map of moon
- ▶ NASA's Artemis mission
- ▶ Genome India Project
- ▶ National Space Promotion and Authorization Centre
- ▶ Monkeypox virus

TEST - 18

**CSAT - 03**  
(Reasoning - 1)

TEST - 19

**CSAT - 04**  
(Reading Comprehension-2)

TEST - 20

**CSAT - 05**  
(Quantitative Aptitude - 2)

TEST - 21

**CSAT - 06**  
(Reasoning - 2)

TEST - 22

**CURRENT AFFAIRS - 02**  
(September to December, 2023)**SECTIONAL TESTS**

TEST - 23

**SECTIONAL TEST - 01**  
(Polity & Governance)

TEST - 24

**SECTIONAL TEST - 02**  
(Economy)

TEST - 25

**SECTIONAL TEST - 03**  
(Environment & Ecology)

TEST - 26

**SECTIONAL TEST - 04**  
(History & Culture of India)

TEST - 27

**SECTIONAL TEST - 05**  
(Geography)

TEST - 28

**SECTIONAL TEST - 06**  
(Science & Technology)**MOCK TESTS**

TEST - 29

**Mock 01 - Paper 1: GS**

TEST - 30

**Mock 02 - Paper 2: CSAT**

TEST - 31

**Mock 03 - Paper 1: GS**

TEST - 32

**Mock 04 - Paper 2: CSAT**

<b>TEST - 33</b>	<b>Mock 05 - Paper 1: GS</b>
<b>TEST - 34</b>	<b>Mock 06 - Paper 2: CSAT</b>
<b>TEST - 35</b>	<b>Mock 07 - Paper 1: GS</b>
<b>TEST - 36</b>	<b>Mock 08 - Paper 2: CSAT</b>
<b>TEST - 37</b>	<b>Mock 09 - Paper 1: GS</b>
<b>TEST - 38</b>	<b>Mock 10 - Paper 2: CSAT</b>
<b>TEST - 39</b>	<b>Mock 11 - Paper 1: GS</b>
<b>TEST - 40</b>	<b>Mock 12 - Paper 2: CSAT</b>
<b>TEST - 41</b>	<b>CURRENT AFFAIRS - 03</b> (Budget and Economic Survey; India Year Book)
<b>TEST - 42</b>	<b>Mock 13 - Paper 1: GS</b>
<b>TEST - 43</b>	<b>Mock 14 - Paper 2: CSAT</b>
<b>TEST - 44</b>	<b>CURRENT AFFAIRS - 04</b> (January to April, 2024)
<b>TEST - 45</b>	<b>Mock 15 - Paper 1: GS</b>
<b>TEST - 46</b>	<b>Mock 16 - Paper 2: CSAT</b>

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