

**GS SCORE**

An Institute for Civil Services

# UPSC SYLLABUS

**explained**

**MICRO TOPICS LISTING**  
**PRE *cum* MAINS**

**UPDATED *for***  
**IAS 2022-23**



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# GS SCORE

An Institute for Civil Services

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# HISTORY

## ANCIENT HISTORY

### 1. Pre Historic Cultures in India

- Sources of Pre History
- Periodization of Indian pre history
- Stone Age
- Palaeolithic (2 million BC – 10,000 BC)
- Mesolithic (10,000 BC – 8,000 BC)
- Neolithic (8000 BC – 4000 BC)
- Chalcolithic Age (4000 BC – 1500 BC)
- Iron Age (1500 BC-200 BC)
- Impact of Iron

### 2. Pastoral & Farming Communities

- Neolithic Phase
- Chalcolithic Phase
- Early Iron Phase
- Geographical Distribution and Characteristics

### 3. Indus Valley Civilization

- Harappan civilisation or Indus Valley Civilisation
- Major Cities Town Planning
- Harappan Internal & Foreign Trade
- Agriculture
- Domestication of animals
- Crafts
- Weights and Measures
- Script and Language
- Harappan Society

- Harappan Religion
- Harappan Economy
- Harappan Burial System
- Harappan Art & Architecture
- Decline of Harappan Culture

### 4. Vedic Society

- Original Home of Aryans
- Features of Aryan Culture
- Vedic Texts & Upanishad
- Sources for Reconstructing Vedic Society and Culture
- Geography of the Rig Vedic Period and Geography of the later Vedic Phases
- Economic Conditions
- Political Organisation and Evolution of Monarchy
- Social Organisation and Varna System
- Religion and Thought

### 5. Pre Mauryan-Period

- Age of 2nd Urbanisation
- Formation of states
- The Sixteen Mahajanapadas
- Gana Sangha or Republics
- Rise of urban centres
- Evolution of Coins
- Haryanka dynasty
- Shishunaga dynasty
- Nanda dynasty

**6. Growth of Jainism and Buddhism**

- Jainism
- Buddhism

**7. The Mauryan Empire**

- Chandragupta and Bindusara
- The Arthashastra
- Megasthenes
- Asoka and His Successors
- Asoka's Inscriptions and Sites
- Asoka's Dhamma
- Mauryan Administration, Economy, Society and Art
- Decline of Maurya

**8. Post-Mauryan India (BC 200-AD 300)**

- Arrival of Indo-Greeks, Shakas, Parthians & Kushana
- Commercial Contacts with the Outside World
- Satavahanas and Other Indigenous Dynasties
- Society: Evolution of Jatis
- Sangam Texts-and Society
- Schools of Art: Gandhara; Mathura ; Amravati

**9. Imperial Guptas**

- Sources of Gupta Rule
- Political history of Guptas
- Fa-hien
- Gupta Administration
- Development of Art & Culture
- Gupta: Age of Golden age
- Economic Conditions
- Urban centres in Gupta period

**10. Harshavardana**

- Sources for Harsha's Period
- Early life of Harsha
- Harsha's Administration
- Important Officials of the empire
- Economy under Harsha
- Huen Tsang
- Society
- Religion

**11. The Southern Dynasties**

- The Satavahanas (230 BC TO AD 225)
- The Pallavas (AD 330–796)
- The Chalukyas (AD 535–1190)
- The Pandyas of Madurai (AD 590–1323)
- The Chola Dynasty (AD 850–1310)
- Rashtrakutas (AD 753–973)

**MEDIEVAL HISTORY**

**1. Central Asian Politics and the Advance of Babur towards India**

- The Timurids
- The Timurid-Uzbek and Uzbek-Iran Conflict and Babur
- Babur's Advance towards India

**2. Struggle for Empire in North-India (Afghans, Rajputs and Mughals)**

- Struggle between Ibrahim Lodi and Babur the Battle of Panipat

- Babur's problems after the Battle of Panipat
- Struggle with Rana Sanga
- Problems of the Eastern Areas and the Afghans
- Babur's Contribution and Significance of his Advent into India

**3. Struggle for Empire in North India**

- Humayun and the Afghans
- Early Activities of Humayun, and the Tussle with Bahadur Shah

- The Gujarat Campaign
- The Bengal Campaign, and Struggle with Sher Khan

#### 4. The Establishment of the North Indian Empire

- The Surs
- Sher Shah's Early Life
- Social and Political Background of Bihar and the Rise of Sher Shah to Power.
- The Sur Empire (1540-56)
- Contributions of Sher Shah

#### 5. Consolidation and Expansion of the Empire - Akbar

- Conflict with the Afghans - Hemu
- Struggle with the Nobility: Bairam Khan's
- Regency; Revolt of Uzbek Nobles
- Early Expansion of the Empire (1560-76) - Malwa, Garh-Katanga, Rajasthan, Gujarat, Eastern India
- Relations with the Rajputs - Growth of a Composite Ruling Class
- Rebellions, and Further Expansion of the Empire in the North West

#### 6. State and Government under Akbar

- Akbar's Concept of Suzerainty
- Structure of Government, Central and Provincial - the Vikalat, the Central Ministries, Provincial
- Government, District and Local Government
- The Working of Government - the Ruler, Land-Revenue System, the Dahsala System, the Mansabdari
- System and the Army

#### 7. Akbar's Religious Views

- Relations with the Ulama and Social Reforms
- The Early Phase (1556-73)
- The Second Phase (1573-80) - the Ibadat Khana
- Debates - the Mahzar - Breach with Orthodox
- Ulama - Re-organisation of Madadd-i-Maash Grants
- Third or Final Phase - Din-i-Ilahi - State

- Policies and religious toleration

#### 8. The Deccan and the Mughals (Upto 1657)

- The Deccani States upto 1595
- Mughal Advance towards the Deccan
- Mughal Conquest of Berar, Khandesh and Parts of Ahmadnagar
- Rise of Malik Ambar, and Frustration of
- Mughal Attempt at Consolidation (1601-27)
- Extinction of Ahmadnagar, Acceptance of Mughal
- Suzerainty by Bijapur and Golconda
- Shah Jahan and the Deccan (1636-57)
- Cultural Contribution of the Deccani States

#### 9. Foreign Policy of the Mughals

- Akbar and the Uzbeks
- The Question of Qandahar and Relations with Iran
- Shah Jahan's Balkh Campaign
- Mughal - Persian Relations -the Last Phase

#### 10. India in the First Half of the Seventeenth Century

- Jahangir's Accession - his Early Difficulties
- Territorial Consolidation and Expansion of the Empire - Mewar, East India and Kangra
- Nur Jahan, and the Nur Jahan 'Junta'
- The Rebellions of Shah Jahan, and the coup de main of Mahabat Khan
- Jahangir as a Ruler
- State and Religion in the First Half of the Seventeenth Century
- Shah Jahan - Consolidation and Expansion of the Empire
- Evolution of the Mughal Ruling Class and the Mansabdari System

#### 11. Aurangzeb - Religious Policies, North India and the Rajputs

- War of Succession
- Religious Policy : First Phase (1658-79)
- Reforms and Puritanical Measures, Hindu

- Temples, Jizyah; Second Phase (1679-1707)
- Territorial Consolidation and Expansion of Empire - North India
- Popular Revolts - Jats, Satnamis, Afghans and Sikhs
- Breach with Marwar and Mewar

**12. Climax and Crisis of the Mughal Empire the Marathas and the Deccan**

- Rise of the Marathas - Early Career of Shivaji -
- Treaty of Purandar - the Agra Visit
- Shivaji's Swarajya - Administration and Achievements
- Aurangzeb and the Deccani States (1658-87)
- Marathas and the Deccan (1687-1707)
- Assessment of Aurangzeb and the Jagirdari Crisis

**13. Society-Structure and Growth**

- Rural Society
- Towns and Town Life
- Artisans and Master-Craftsmen
- Women
- Servants and Slaves
- Standard of Living
- The Ruling Classes - Nobility, Rural Gentry
- The Middle Strata
- The Commercial Classes

**14. Economic Life-Patterns and Prospects**

- Inland Trade
- Overseas Trade - Role of Foreign Trading
- Companies - Position of Indian Merchants Over-land Trade
- The Mughal State and Commerce

- Trend of India's Economy and Prospects during the First Half of the Eighteenth Century

**15. Religion, Fine Arts, Science and Technology**

- Religion- Hindu Religion, Sikh Religion, Islam
- Fine Arts - Architecture, Painting, Language and Literature, Music
- Science and Technology

**16. Northern India in the First Half of the Eighteenth Century**

- Bahadur Shah I, and the Beginning of the Struggle
- For Wizarat - Rajput Affairs - Marathas and the
- Deccan - Accentuation of the Party Struggle
- Struggle for 'New' Wizarat: Zulfiqar Khan and Jahandar Shah (1712-13)
- The Saiyid Brothers' Struggle for 'New' Wizarat
- The Saiyid 'New' Wizarat
- The Wizarat of M. Amin Khan and Nizam-ul-Mulk
- Rise of Regional States, Beginning of Foreign Invasions of India (1725-48)

**17. The Maratha Bid for Supremacy**

- The Marathas and their Policy of Expansion
- The Marathas and Nizam-ul-Mulk
- The Maratha Advance into Gujarat and Malwa
- The Maratha Advance into Doab and Punjab:
- First Phase (1741-52); Second Phase (1752-61);
- Third Battle of Panipat

**MODERN HISTORY**

**1. Scenario before 1857**

- Later Mughals

- Regional powers in 18th Century
- The British conquest of India
- Carnatic Wars



- Battle of Plassey & Buxar
- Anglo-Mysore War
- Anglo Punjab War
- British Administration before 1857
- British Economic Policy

## 2. Revolt of 1857

- Causes for revolt of 1857
- Leaders of revolt of 1857
- Suppression of revolt of 1857
- Nature of revolt of 1857
- Consequences of Revolt of 1857

## 3. Early Nationalism

- Indian National Movement (1858-1905)
- Early Nationalists and Swadeshi Movement
- Government of India Act 1909
- Home rule league movement

## 4. The struggle for Swaraj

- Montague's statement – Aug 1917
- Emergence of Gandhi – as a mass leader
- Khilafat & Non-Cooperation Movement (NCM)
- Swaraj Party
- Revolutionary Terrorism phase II (1920's)
- Simon Commission and Nehru report

## 5. Intimation of freedom

- Civil Disobedience Movement
- Round table conference
- Poona pact
- Government of India Act 1935

- Tripuri session – 1939
- August offer
- Individual Satyagraha 1940-41

## 6. Towards achievement of freedom

- Popular struggles in the princely states
- 2nd World War and Nationalist response

## 7. Partition of India

- Rise of Communalism
- Wavell plan
- Cabinet Mission Plan
- Mountbatten plan

## 8. During the freedom struggle

- Indian Renaissance/Socio-Religious Movement
- Civil Rebellions during British
- Tribal Movements during British Period
- Peasant's Movement during British Period
- Working class Movement (1850-1900)
- Growth of communalism
- Left and Communist trends in National Movement
- Press and Education during British Period
- Role of Women in Freedom Struggle
- Governor Generals of India
- Viceroys of India
- Important persons
- Important news paper/journals
- Congress sessions

# POST INDEPENDENCE INDIA

## 1. Re-organisation of states

- Constitutional provisions related to State formation
- Factors that lead to merger
- Accession of the princely states

- Accession of States under France and Portuguese
- Accession of Sikkim
- Rehabilitation of the Refugees
- Federal crisis

- Regional aspirations, insurgencies and areas of tension
- Accommodation and national integration

**2. Linguistic Regionalism In India**

- Constitutional position and language policy
- Language and regionalism
- Recent controversy due to rise of Hindi

**3. Tribal Issue and Policy Consolidation**

- Issues & Present Status
- Policy consolidation

**4. Issue of Women and Evolution of Women Movement**

- Issues & challenges
- Women movements
- Government policy response and legislation
- Governmental schemes

**5. Problem of Caste And Social Consolidation**

- Caste practices in India
- Ambedkar Movement
- Constitutional provisions
- Recent government initiatives for emancipation of Scheduled Castes
- Issues of Manual Scavenging

**6. Communalism & Social Consolidation**

- Secularism
- Causes of Communalism in India
- Consequences of the communalism and social consolidation

**7. Issue Of Linguistic Minorities**

- Operational Inefficiency
- Government initiatives

**8. Overview Of Economic Development Since Independence**

- Planning in India

**9. Agriculture**

- Industry
- Service sector
- Current challenges facing the Indian economy
- Agriculture
- Journey through Five Year Plans
- Land Reforms
- Post Green Revolution Agricultural Issues
- Agrarian Movements
- Achievements in Agriculture Since Independence
- Recent Challenges

**10. Industry**

- Industrial development since independence
- Public sector since independence
- Sectoral Development
- Private Sector since Independence
- Industrial Policy since Independence
- Make in India

**11. New Economic Policy**

- Impact of New Economic Policy

**12. Post-Independence Policy Of Science And Technology**

- India's Policy in the Field of the Science and Technology
- Institutional Framework for Science and Technology Development
- Science and Technology In Pre-Reform Period
- Impact of Economic Reform on the Science and Technology in India:
- New Policy Initiatives in the S&T
- Agenda of the Skill Training



# WORLD HISTORY

## 1. Beginning of Modern Age

- Disintegration of the Feudal System
- Renaissance
- Humanism
- Art and Architecture
- Literature
- Science
- Reformation etc.
- Explorations, Discovery, Trade
- Colonization – Rise of Nation State
- The English Revolution

## 2. French Revolution

- Causes
- The revolution in France
- France under Napoleon
- Impact of revolution
- Significance of revolution

## 3. Nationalism in Europe

- Rise of the nation- state system
- Unification of Italy
- Unification of Germany

## 4. Colonialism and Imperialism

- Colonialism
- The age of Imperialism (1870-1914)
- Imperialism in Asia
- Analysis of Colonialism

## 5. Emergence of USA

- Foundation of American Colonies
- The Independence of United States of America
- The American Revolutionary War
- What was the impact of American Revolution?
- Political Effects of the Revolution
- How did the American Revolution influence the French Revolution?
- US Civil War
- Impact of Civil War on USA
- Global Impact of US Civil War
- Impact on India

## 6. World War-I

- Major causes of the war
- Course of the war
- Analysis of major events of the war
- Consequences of World War I
- Aftermath of World War I
- League of Nations

## 7. Russian Revolution

- Major events in pre-revolution Russia
- Causes
- Course of revolution
- Consequences
- Aftermath of the war
- Post-Lenin Russia

## 8. Inter-War Years (1919 To 1939)

- The Great Depression
- The Great Depression- an economic perspective
- Rise of Fascism in Italy
- Rise of Nazism in Germany
- Soviet Union (USSR)

## 9. World War- II

- Foundations of the war
- Course of the war
- Aftermath of war
- Analysis of the war
- Decolonization phase

## 10. Development In Middle East

- Democratic reforms in Middle East
- Arab nationalism
- Israel

## 11. Cold War

- Reasons
- Development of Cold War (1945-1953)
- To what extent was there a there thaw after 1953?

- Nuclear Arms Race and the Cuban Missile Crisis (1962)

**12. Post Cold-War World**

- Global issues since 1991
- Integration of Europe
- European integration- a timeline
- Rise of global Islamic terrorism

- Rise of China

**13. Communism, Socialism and Capitalism**

- Capitalism (concept, types and example)
- Communism (concept, types, example)
- Relevance of capitalism in present era
- Socialism

**INDIAN CULTURE**

**1. Visual Art**

- Sculptures of Harappan Civilisation
- Sculptures of Mauryan Age
- Post-Mauryan Period
- Jain Sculptures
- Buddhist Sculpture
- Gupta Sculpture
- Medieval School of Sculpture
- Modern Indian Sculpture

**2. Architecture in Ancient India**

- Harappan Period
- Mauryan Architecture
- Post-Mauryan Period Gupta Period
- Temples of Khajuraho
- Temples of Odisha
- Temples of Gwalior
- Temples of Gujarat
- Temples of Rajasthan
- Temples of Bengal
- Temples of Assam
- Temples of Himachal Pradesh
- Temples of Jammu and Kashmir
- Pallava Period
- Chola Period
- Pandya Temples
- Vijaynagar Period
- NayakaTemples
- Temples of Kerala
- Vesara Style
- Hoysala Style
- Rashtrakuta Period

**3. Indo-Islamic Architecture**

- Imperial Style Delhi Sultanat
- Provincial Style
- Mughal Style
- Sikh Style of Architecture
- Rajput Architecture
- Salient features

**4. Modern Architecture**

- European Influence
- Indo-Saracenic Architecture
- Post-Independence Period

**5. Indian Paintings**

- Tradition of Mural Paintings in India
- Tradition of Miniature Paintings in India
- Paintings in the Deccan
- Rajput School of Painting
- Pahari School of Painting
- Miniature Painting in South India
- Regional Paintings
- Modern Paintings
- Contemporary Paintings

**6. Pottery Tradition in India**

- Ochre:Coloured Pottery(OCP)
- Black and Red Ware (BRW)
- Painted GreyWare (PGW)
- Northern Black Polished Ware (NBPW)
- Glazed and Unglazed Pottery

**7. Music in India**

- Main Pillars of Indian Music

- Forms of Indian Music
- Musical Instruments
- Institutions Related to Music

### 8. Dances in India

- Concept of Dance in India
- Concept of Ashta Nayika
- Eight Classical Dance Forms in India
- Folk Dances
- Modern Dances

### 9. Martial Arts in India

- Genesis of Martial Arts
- Forms of Traditional Martial Arts

### 10. Indian Theatre

- Classical Sanskrit Theatre
- Regional Theatre
- Modern Theatre
- Renaissance of Indian Theatre

### 11. Indian Puppetry

- String Puppets
- Shadow Puppets
- Rod Puppets
- Glove puppets
- Modern Puppetry
- Tribal Puppetry

### 12. Indian Cinema

- Cinema in India
- History of Indian Cinema
- Classification of Indian Cinema Film Music of India

### 13. Religions in India

- Pre-Vedic Religion
- Hinduism
- Buddhism
- Jainism
- Sikhism
- Islam
- Christianity
- Zoroastrianism
- Judaism
- Philosophy in India

### 14. Bhakti & Sufi Movements

- Bhakti Movement
- Vaishnava Acha:ryas:Metaphysical Foundation
- Other Saints of Bhakti Movement
- Maharashtra Dharma
- Sufism

### 15. Languages & Literature in India

- Sanskrit Literature
- Pali Literature
- Prakrit Literature
- Tamil Literature
- Telugu Literature
- Malayalam Literature
- Kannada Literature
- Odia Literature
- Assamese Literature
- Bengali Literature
- Gujarati Literature
- Rajasthani Literature
- Punjabi Literature
- Marathi Literatur
- Hindi Literature
- Persian Literature
- Urdu Literature

### 16. Miscellaneous Topics

- Indian Handicrafts
- Indian Universities
- Personalities Related to Culture
- Places of Cultural Interest
- Fairs and Festivals in India
- Cultural Institutions in India
- Awards and Honours Associated with Culture
- The Calendar
- The Eras
- Science and Technology in Ancient India
- UNESCO's List of Cultural Heritage in India
- Legal Provisions Related to the Protection and Promotion of Indian Culture and Heritage

### 17. Recent developments

- 'The Miyas of Assam, and their char-chapori culture'

- |   |                          |  |                          |
|---|--------------------------|--|--------------------------|
| ◦ "Life in Miniature' Project'  | <input type="checkbox"/> | ◦ Central Sanskrit Universities Bill, 2020                       | <input type="checkbox"/> |
| ◦ Ayodhya's Ram Temple, a 3-Storey Structure with Nagara Style Architecture | <input type="checkbox"/> | ◦ Battle of Çanakkale  | <input type="checkbox"/> |
| ◦ National List of Intangible Cultural Heritage (ICH)                       | <input type="checkbox"/> | ◦ The five 'iconic' archaeological Sites mentioned in the Budget | <input type="checkbox"/> |
| ◦ Kurzarbeit Scheme   | <input type="checkbox"/> | ◦ Battle of Koregaon   | <input type="checkbox"/> |
|   |                          | ◦ Tulu Language  | <input type="checkbox"/> |

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# GEOGRAPHY

## PHYSICAL GEOGRAPHY

### 1. General Geography

#### □ The origin of the Earth

- Early Theories
- Modern Theories – BBT
- Star Formation
- Formation of Planets
- Solar System

#### □ The Evolution of the Earth

- Layered Structure (5 layers)
- Evolution of Lithosphere
- Evolution of Atmosphere
- Evolution of Hydrosphere

#### □ Geological History of the Earth

- 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
- Local and Standard Time and the International Date Line, Calendar
- Eclipses - Solar, Lunar

#### □ Origin of Life

#### □ Geological Time Scale

### 2. Geomorphology

#### □ Interior of the Earth

- Sources of Information
- Direct

- Indirect - Earth Quake Waves Volcanoes
- Seismic waves 
  - ▶ Body waves
  - ▶ Surface waves
  - ▶ Understanding earth's interior with help of seismic waves
- Internal Structure of earth 
  - ▶ Crust
  - ▶ Lithosphere
  - ▶ Mantle
  - ▶ Asthenosphere
  - ▶ Outer core
  - ▶ Inner core
  - ▶ Seismic Discontinuities

#### □ Geology

- 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
- Rock Cycle
- ▣ **Earthquakes**
- Waves: P,S, Body , Surface
- Shadow Zone
- Types of Earthquakes
- Causes of Earthquake
- Effects
- Frequency
- Locating an Epicentre
- Distribution of Earthquake
- Earthquake Observatories
- ▣ **Volcano**
- Types 
  - ▶ Shield
  - ▶ Composite
  - ▶ Caldera
  - ▶ Flood Basalt
  - ▶ Mid Ocean Ridge
- Types of lava 
  - ▶ Andesitic or Acidic lava
  - ▶ Basic or Basaltic lava
- Intrusive volcanic Landforms 
  - ▶ Batholiths
  - ▶ Lacoliths
  - ▶ Lapoliths
  - ▶ Phacoliths
  - ▶ Sills
  - ▶ Dykes
- Extrusive Volcanic Landforms
- Geysers and Hot springs
- Extinct, Dormant and Active volcanoes
- Distribution of Volcanoes 
  - ▶ Pacific Ring of Fire
  - ▶ Mediterranean volcanism
  - ▶ Other regions
- Effects of Volcanoes
- ▣ **Tsunami**
- Mechanism of Tsunami waves
- Properties of Tsunami waves
- Effects of Tsunami
- ▣ **Geomorphic Processes**
- Earth's Surface 
  - ▶ Exogenic Forces

- ▶ Endogenic Forces
- ▶ Gradation , Degradation & Agradation
- Geomorphic Process 
  - ▶ Endogenic Process 
    - ◆ Diastrophism
    - ◆ Orogenic
    - ◆ Epierogenic
    - ◆ Earthquakes
    - ◆ Plate movements
    - ◆ Volcanism
  - ▶ Exogenic Forces
- Denudation Processes
- Weathering
- Mass movements
- Erosion Transportation & Deposition
- ▣ **Distribution of Continents & Oceans**
- Theories 
  - ▶ Continental Drift Theory 
    - ◆ Alfred Wegner 1912
    - ◆ 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
  - ▶ Forces of Drifting 
    - ◆ Pole Fleeing Force
    - ◆ Tidal Force
  - ▶ Post Drift Studies 
    - ◆ Convectional Current Theory
    - ◆ Mapping of the Ocean Floor
- Continents – plate Tectonics 
  - ▶ Lithospheric Plates 
    - ◆ Major Plate
    - ◆ Minor Plates
  - ▶ Plate Boundaries 
    - ◆ Divergent
    - ◆ Convergent
    - ◆ Transform
  - ▶ Rates of Plate Movements
  - ▶ Force of plate movements
  - ▶ Indian Plate 
    - ◆ Movement from 7 1mnyrs ago till Today

**Landforms and their Evolution**

- Causes 
  - ▶ Geomorphic Processes
  - ▶ Agents
- Geomorphic Agents 
  - ▶ Erosional or Destructional
  - ▶ Depositional or Constructional
- Agents and their Impacts 
  - ▶ Wind , Running Water , Ground Water, Glaciers , Waves & Currents
- Winds 
  - ▶ One of the Two dominant agents in Hot deserts
  - ▶ Cause – Deflation Abrasion Impact
  - ▶ Erosional landforms 
    - ◆ Pediments and Pedit plains
    - ◆ Playas
    - ◆ Deflation Hollows and Caves
    - ◆ Mushroom , Table & Pedestal Rocks
  - ▶ Depositional Landforms 
    - ◆ Barchans
    - ◆ Seif
    - ◆ Parabolic
    - ◆ Transverse
    - ◆ Longitudinal
- Running Water 
  - ▶ Humid Regions
  - ▶ 2 Components 
    - ◆ Overland Flow – Sheet
    - ◆ Linear Flow – Streams
  - ▶ Stages 
    - ◆ Youth Mature Old
  - ▶ Erosional Landforms 
    - ◆ 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 
    - ◆ Balkans, Adjacent to Adriatic regions
  - ▶ Erosional Landforms 
    - ◆ Pools-Swallow Hole, Valley Sinks (Uvalas), Sinkholes, Collapse sinks (Dolines), Lapias, Ridges, Limestone Pavements
    - ◆ Caves – Altering bed of Rocks (Shale sandstone quartzite), 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 
    - ◆ Clifs
    - ◆ Terraces
    - ◆ Caves
    - ◆ Stacks
  - ▶ Depositional Landforms 
    - ◆ Beaches and Dunes
    - ◆ Bars Barriers Spits
- Weathering 
  - ▶ Weather over Earth Materials
  - ▶ 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(Flaking)– Exfoliation Domes, Tors
- ▶ Significance of Weathering 
  - ◆ Soil Formation
  - ◆ Biomes and Biodiversity
  - ◆ Leaching / Enrichment
- Mass Movements 
  - ▶ Activating causes
  - ▶ Forms of movement – Heave Flow Slide
  - ▶ 3 major Groups – Slow Movement, Rapid Movements , land Slides
- **Landforms across the world:** 
  - Rivers and lakes
- **Mountain & Peaks** 
  - Fold Mountain
  - Block Mountain
  - Volcanic mountains
- **Plateaus** 
  - Plateau Formation process
  - Plateau Types 
    - ▶ Dissected plateau
    - ▶ Volcanic plateau
  - Economic significance of plateau
  - Major plateau of the world

**3. Climatology**

- **Composition of Atmosphere**
  - Gases
  - Water Vapour
  - Dust Particles
- **Structure**
  - Exosphere
  - Thermosphere
  - Mesosphere
  - Stratosphere
  - Troposphere
  - Altitude vs Temperature
- **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 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
- **Temperature(T)**
  - Factors controlling T distribution
  - Distribution of T Month of January-July
  - Range of T Month of January-July
  - Inversion of Temperature
- **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, Polar cell
  - Seasonal Wind
  - Local Wind
  - Land and Sea Breezes
  - Mountain and Valley winds
  - AIR MASS – fronts
  - Extra Tropical Cyclone
  - Thunderstorms
  - Tornadoes
- ▣ **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 Altocumulus
    - ▶ Low – Stratocumulus Nimbostratus
    - ▶ Vertical Development – Cumulus and Cumulonimbus
- Precipitation 
  - ▶ Rainfall Snowfall Sleet Hail Hailstones
- Types of Rainfall 
  - ▶ Conventional
  - ▶ Orographic
  - ▶ Cyclonic
  - ▶ Frontal
  - ▶ Monsoonal
- World Distribution of Rainfall
- ▣ **Tropical Cyclone**
  - Conditions required for formation of Tropical Cyclone 
    - ▶ Good source of latent heat
    - ▶ Coriolis force
    - ▶ Low level disturbances
    - ▶ Temperature difference between air masses
    - ▶ Wind shear
    - ▶ Upper air disturbances
  - Convective cyclogenesis (Development of Tropical Cyclone)
  - Path of Tropical Cyclone
  - Damage associated with Cyclone
  - Arabian sea Cyclone
  - Naming of Tropical Cyclone
  - Early warning system for tropical Cyclone
- ▣ **Jet Streams**
  - Features of Jet streams
  - Types 
    - ▶ Permanent
    - ▶ Temporary
  - Influence of Jet streams on weather
  - Jet streams and aviation
- ▣ **Temperate Cyclones**
  - Air masses
  - Fronts
  - Origin and development of Temperate Cyclone
  - Comparison between Tropical and Temperate Cyclone
- ▣ **Polar Vortex**
  - Polar vortex details
  - Polar vortex and Ozone depletion

**El Nino and La Nina**

- ENSO
- Indian Ocean dipole effect
- Effect on regional and world climate
- Effect of these events on Indian Monsoon

**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

**4. Oceanography**

**Water on the Surface of the Earth**

- Hydrological Cycle 
  - ▶ Component
  - ▶ Processes

**Oceans**

- Relief of the Ocean floor
- 4 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
  - ▶ Guy outs
  - ▶ Atoll

**Temperature of the Ocean Water**

- Vertical

- Spatial
- Factors affecting Temperature distribution 
  - ▶ Latitude
  - ▶ Unequal distrivution of land & Water
  - ▶ Prevailing wind
  - ▶ Ocean Currents
- Horizontal & Vertical Distribution 
  - ▶ Thermocline
  - ▶ 3 layers

**Salinity of the Ocean Water**

- Factors affecting salinity 
  - ▶ Evaporation and precipitation
  - ▶ Fresh water flow from rivers
  - ▶ Wing
  - ▶ Ocean currents
  - ▶ Horizontals distribution of sailinity
- Vertical Distribution of salinity
- Density of Ocean Waters

**Movements of ocean Water**

- Factors influencing Movement 
  - ▶ Temperature
  - ▶ Salinity
  - ▶ Density
  - ▶ Sun Moon Winds
- Motion – Horizontal & 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**

- Influenced by 2 forces
- Primary Force that initiates the movement 
  - ▶ Heating of Solar Energy
  - ▶ Wind
  - ▶ Gravity
  - ▶ Coriolis force
- Secondary force that influence the currents to flow
- Characteristic – Drift – 5 knots
- 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
  - ▶ Desert formation and Ocean currents
  - ▶ Atlantic Meridional Overturning Circulation

**❑ Resources from the Ocean**

- Ocean deposits 
  - ▶ Terrigenous Deposits
  - ▶ Pelagic deposits
- Mineral resources on deep sea floor
- Energy resources
- Biotic resources
- Deep ocean mission
- UNCLOS 
  - ▶ Territorial waters
  - ▶ Contiguous zone
  - ▶ Exclusive economic zone
  - ▶ High seas

**5. Water Resource**

- Underground water resource
- Surface water resources
- Inland water resources: Utilization of inland water resources
- Oceanic water resources: Main features of ocean
- Utilization of oceans by man
- Water consumption patterns
- Water pollution
- Conservation of water resources
- Techniques of water conservation
- River Interlinking Projects
- The problem of ageing dams

**6. Biogeography****❑ Soil**

- 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
- Miyawaki Method

# PHYSICAL GEOGRAPHY OF INDIA

## 1. Physiography of India

- Location
- Geopolitical Significance of India
- Geological Divisions 
  - ▶ The Peninsular Block
  - ▶ The Himalayas and other
  - ▶ Peninsular Mountains
- Indo-Ganga-Brahmaputra Plain
- Physiographic Divisions

## 2. Drainage System

- Drainage Patterns 
  - ▶ Drainage System of India 
    - ◆ Himalayan Drainage System 
      - ▣ River Systems of Himalayan Drainage
      - ▣ Indus river system
      - ▣ Ganga River System
      - ▣ Brahmaputra river system
    - ◆ Peninsular Drainage System 
      - ▣ River Systems of Peninsular Drainage
      - ▣ Small Rivers Flowing Towards East and West

## 3. 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 & their impact
- The rhythm of Seasons 
  - ▶ The cold weather season
  - ▶ The hot weather season
  - ▶ The southwest monsoon season
  - ▶ The retreating monsoon season
- Climatic Regions of India

## 4. Soils in India

- Classification of Soils
- Soil textures
- Issue of Soil degradation & Soil
- Erosion
- Soil Conservation

## 5. Natural Vegetation

- Types of Forests in India
- Forest Cover in India
- Forest Conservation
- Forest Problems in India

# HUMAN GEOGRAPHY

## 1. Demography

- Concept of human resources
- Population distribution
- Factors of population distribution—  
Physical factors
- Socio-cultural factors
- Demographic factors
- World population distribution
- Ecumene
- Non-ecumene
- Continent-wise distribution of

- population
- Density of population
- Pattern of population density
- Population increase (growth) in the world
- Causes of rapid increase in population
- Present trend
- Future projections
- Determinants of population growth
- Natural increase
- Characteristics of population

- Age composition
- Population pyramids
- Sex composition
- Literacy
- Theories of population growth
- Malthusian theory
- Marxian theory
- Demographic transition theory
- Optimum population
- Over-population
- Under-population
- Population problems
- Population problems of developing countries
- Population problems of developed countries
- Population dilemma of Europe
- Population Policies: of China, of India
- Various types of rural settlements
- Relationship between house types with relief, climate and building materials
- Rising Youth Population

## 2. Urbanization

- Basic Feature and Pattern's of India's Urbanization
- Issues of Urbanization in India
- Rural Urban Migration
- Emergence of Slums
- Urban Transport
- Waste Disposal
- Water Supply, Drainage and Sanitation
- Electronic Waste
- Urban Poverty
- Real Estate (Regulation & Development) Bill, 2013
- Way Forward to Tackle Issues Related to Urbanization
- Inclusive Cities/Smart cities

- Recent government programmes: AMRUT
- Migration
- Reverse Migration
- Displacement
- Importance of the Rehabilitation Policy
- Urban settlements: types
- Urbanisation process in India.
- Morphology of urban settlements
- Town planning and patterns of rural settlement
- Settlement types of the world
- Migration: Push factors and pull factors
- Emigration during colonial, post-independent and post-liberalisation period
- Internal versus world migration
- Functional classification of cities
- Difference between boundaries and frontiers, their classification
- Rural urban fringe characteristics, advantages, problems
- National urbanisation policy
- Principles of urban planning
- Land cover transformation
- Factors affecting rural settlements, their types and patterns
- Cities – hierarchical classification, morphological classification

## 3. Census

- Literacy
- Sex ratio
- Family Planning
- Old Age
- Age Structure
- Density
- Population growth
- Census terminology
- Caste Census Issues

# ECONOMIC GEOGRAPHY

## 1. Agriculture

### Land Resource

- Land-use
- Land capability classification

- Causes of Land Degradation
- Impact of Land Degradation
- Steps taken by GOI
- Sustainable Land Management

### Basic terms related to Agriculture

- 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
- Productivity of Crops and conditions for growth**
- Wheat 
    - ▶ Conditions of growth
    - ▶ Varieties
    - ▶ Types of cultivation
    - ▶ Production pattern
    - ▶ International trade
  - Rice 
    - ▶ Conditions of growth
    - ▶ Varieties
    - ▶ Methods 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 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
  - Abaca, Henequeno
  - Sisal 
    - ▶ Raw Silk 
      - Production pattern
      - International trade
    - ▶ Natural Rubber 
      - Other sources of rubber
      - Plantations in South-east Asia
      - Production pattern
      - International trade
    - ▶ Sugarcane 
      - Conditions of growth
      - Production pattern
      - International trade
    - Sugarbeet—Conditions of growth
    - Production pattern



- Sugar industry
- Sugar consumption
- International trade

## 2. 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
- Precious metals: Gold
- Silver
- Platinum
- Mineral chemicals
- Mica
- Potash
- Phosphate
- Nitrates
- Sulphur
- Conservation of mineral resources

## 3. Energy resources

- Classification of energy
- Production of 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
- By products of coal
- Conservation of Coal Petroleum
- 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
- Atomic (Nuclear) Energy
- Atomic: source minerals: Uranium
- ▶ World distribution of uranium
- Production of uranium
- Thorium
- ▶ Production of Atomic (Nuclear) Energy
- Nuclear Energy: the energy of future
- Alternative (non-conventional) Sources of energy
- Renewable Energy
- Solar Energy
- Wind Energy
- Geothermal Energy
- Tidal Energy
- Wave Energy
- Biomass Energy
- Alternate Energy Sources
- Hydrogen as a Fuel for Future or Hydrogen as an Alternative Energy Source
- Microbial Fuel Cell
- Energy Context with Respect to Indian Scenario
- Energy Plantation
- Energy crisis

## 4. Industry

- Industrial development
- Iron And Steel Industry
- Process of iron and steel production
- Location of iron and steel industry
- Early localization
- Development of iron manufacture
- Distribution of iron and steel industry

- Global steel production
- International trade
- Growth potential of the steel industry
- 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
- Other industrial machinery
- Agricultural machinery
- Manufacturing of transport equipment
- Automobile industry
- Railway car and locomotive industry
- Shipbuilding
- Recent trends
- Aircrafts industry
- Chemical Industry
- Classes of chemicals: Branches of chemical industry
- Heavy chemical industry
- Production of acids and alkalies
- Rise of chemical industry
- Fertilizer industry: Nitrogen fertilizers
- Phosphate fertilizers
- Potash fertilizers
- Explosives
- Glass industry: Production of glass
- Agro-industries
- Synthetic rubber industry
- Pulp and paper industry: Essential conditions for pulp production

- Production of paper and paper board
- Newsprint
- International trade
- Salient features of pulp and paper industry
- 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.

### 5. Transport and Communication

- Modes of Transportation
- Land Transport 
  - ▶ Roads
  - ▶ Railways
- Water Transport
- Sea Routes 
  - ▶ Shipping Canals
  - ▶ Inland Waterways
- Air Transport
- Pipelines
- Major Port Authorities Act, 2021 + Draft Indian Ports Bill, 2021
- Regional Rapid Transit System 1
- Odisha's coastal highway
- AERA Act amendment – Way to boost up Air transport

## CONTEMPORARY ISSUES

- India's North Eastern states decertifying most rapidly
- 'The New Green Revolution: A Just Transition to Climate-Smart Crops'

- Marine heatwaves
- Atlantic Meridional Overturning Circulation (AMOC)

- |   |                          |   |                          |
|---|--------------------------|---|--------------------------|
| ◦ Discovery of India's First ever Lithium Reserves in Karnataka's Mandya                  | <input type="checkbox"/> | ◦ India largest emitter of SO <sub>2</sub> in the world   | <input type="checkbox"/> |
| ◦ Naming of Tropical Cyclones   | <input type="checkbox"/> | ◦ Bamboonomics  | <input type="checkbox"/> |
| ◦ Great Barrier Reef as World Heritage in Danger  | <input type="checkbox"/> | ◦ Burning of Amazon forest                                | <input type="checkbox"/> |
| ◦ Age of Earth's inner core revised   | <input type="checkbox"/> | ◦ 'Dead-Zone' found in the Gulf of Mexico                 | <input type="checkbox"/> |
| ◦ Earth's water a result of asteroid impacts and leftover gas from Sun's Birth: Study     | <input type="checkbox"/> | ◦ Miyawaki Method   | <input type="checkbox"/> |
| ◦ East African Rift system is slowly breaking away with Madagascar splitting into pieces. | <input type="checkbox"/> | ◦ Avian botulism  | <input type="checkbox"/> |
| ◦ India Cooling action plan   | <input type="checkbox"/> | ◦ Massive reserves of mercury found in arctic permafrost. | <input type="checkbox"/> |
| ◦ Climate Vulnerability Map of India  | <input type="checkbox"/> | ◦ Rice knowledge Bank                                     | <input type="checkbox"/> |
|   |                          | ◦ Global Agriculture and food security programme          | <input type="checkbox"/> |
|   |                          | ◦ Noney Bridge  | <input type="checkbox"/> |

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# INDIAN SOCIETY & SOCIAL JUSTICE

## INDIAN SOCIETY

### Salient features of Indian society

- Features of Indian society
- Changes within Indian society and their repercussions
- Causes of changes
- Indian Society today

### Diversity of India

- What is diversity?
- Types of diversities in India
- Can diversity be equated with difference?
- The unity in diversity- a reality or a chimera
- Manner of reconciliation

### Role of women's organizations

- Women's organizations in Indian history
- Types of women's organizations
- Level of penetration
- Women's organization – a ray of hope few case studies
- Problems faced by women's organizations
- Is a larger vocal role possible and ways to achieve the same
- Role of SHGs, Micro finance Institutions

### Poverty and development issues

- Poverty
- Concept of development
- Sen vs Bhagwati model
- Crisis of development

- Certain case studies
- Government's initiatives and the five year plans
- Role of civil society organizations

### Effects of globalization on Indian society

- What is the meaning of globalization
- Kinds of impact of globalization – economic, political, developmental and socio-cultural
- Is the impact solely positive or negative

### Social empowerment

- Meaning and concept of social empowerment
- Why do we need social empowerment?
- Specific sections for whom social empowerment is the life blood
- Social empowerment through the five year plans
- Government's initiatives for empowerment
- Empowerment in reality and India's experience
- Other approaches /players/tools for social empowerment and some case studies on the same

### Communalism

- Meaning and concept of communalism
- Historicity of communalism
- Recent incidents
- Role of third parties in inciting/perpetrating communalism

- Communalism under the law
- Can communalism eradicated from the Indian society completely
- ▣ **Secularism**
  - Meaning and concept of secularism
  - Secularism through the vantage point of Indian Constitution
  - Comparisons of models Indian & Western
  - Gandhiji on religion
  - Indian philosophy on secularism
- ▣ **Regionalism**
  - Threats on the secular spirit
  - Is the Indian democracy mature enough to handle the gravity of secularism
  - Meaning and concept of regionalism
  - Theories on regionalism
  - Regionalism in its various manifestations
  - Role of various players
  - Recent incidents causing a wave of flurry
  - Possible ways to tackle the same

## SOCIAL JUSTICE

- ▣ **Welfare schemes for vulnerable sections of the population by the Centre and States**
  - Constitutional arrangement
  - Women welfare
  - Gender technology gap
  - Women in Indian Political System
  - Issue of Marriageable Age for Women
  - Child welfare
  - SC/ST welfare
  - OBC welfare
  - Caste Census
  - gender reservation in ULB
  - Minorities welfare
  - Old age welfare
  - Legislations
  - Issues
  - Reforms needed
- ▣ **Services relating to Health, Education, Human Resources**
  - Education structure in India
  - Primary, secondary and higher education
  - Initiatives taken by GOI in education
  - Reforms needed
  - Recommendations of committees
  - Future prospects in education sector
  - Skill development, indicators, indicators
  - Private and Public health structure
  - NITI Aayog Report
  - Economic development and human
- development
- Reforms needed
- SDGs and India
- ▣ **Issues relating to poverty and hunger**
  - Poverty definition by different committees
  - Poverty data in India
  - Causes of poverty
  - Poverty and unemployment
  - Poverty and social conflict
  - Impact of LPG on poverty
  - Linkage between poverty and development
  - Rural poverty
  - Urban poverty
  - Feminization of poverty
  - Poverty alleviation measures
  - Problems in implementation of Poverty alleviation programmes
  - Poverty and Hunger
  - Food security programmes and issues
  - Hunger and health
  - Impact of hunger and poverty on economic development of the nation
  - Controversy related to poverty data estimation
- ▣ **The Scheduled and Tribal Areas**
  - 5th Schedule Areas
  - 6th Schedule Areas

- Composition of autonomous councils
- Role and functions of councils
- Role of Governor with respect to tribal areas
- Tribal sub plan

□ **Start-up and Skill Development**

- Start Up India Scheme
- Stand up India Scheme
- National Student Startup Policy
- National Skill Development Mission
- Pradhan Mantri Kaushal VikasYojana
- Deen Dayal AntyodayaYojana
- Deen Dayal Upadhyaya Grameen KaushalyaYojana
- Skill Development Initiative Scheme
- Self-Employment & Talent Utilisation (SETU)
- Atal Innovation Mission

□ **Vulnerable Sector**

- Social Security
- Atal Pension Yojana
- Pradhan Mantri Jeevan Jyoti BimaYojana
- Pradhan Mantri Suraksha BimaYojana
- Minorities
- Nai Roshni Scheme
- USTAAD Scheme (Upgrading the Skills and Training in Traditional Arts/Crafts for Development)
- Nai Manzil Scheme
- Women and Child Development
- Beti Bachao Beti Padhao
- Sukanya SamridhiYojana
- Digital Gudda Guddi Board
- Sabla
- Ujjawala Scheme
- Janani SurakshaYojana
- Janani Shishu Suraksha Karyakram
- SC/ST
- Vanbandhu Kalyan Yojana
- Pradhan Mantri Adarsh Gram Yojana
- Disability
- Accessible India Campaign (Sugamya Bharat Abhiyan)

□ **Health**

- National Health Mission
- National Ayush Mission

- Swasthya Rakshan Program
- Jan Aushadhi Scheme
- Mission Indradhanush
- NFHS-4 survey

□ **Education**

- Padhe Bharat Badhe Bharat
- Mid Day Meal Scheme
- Ishan Uday
- GIAN (Global Initiative of Academic Networks)
- Rashtriya Avishkar Abhiyan
- SWAYAM (Study Webs of Active - Learning for Young Aspiring Minds)

□ **Rural & Urban Development**

- Sansad Adarsh Gram Yojana
- Gram Uday Se Bharat Uday Abhiyan
- Shyama Prasad Mukharjee Rurban Mission
- Deendayal Upadhyaya Gram Jyoti Yojana
- Pradhan Mantri Gram SadakYojana
- Swachch Bharat Abhiyan
- Pradhan Mantri AwasYojana- Gramin
- Pradhan Mantri Awas Yojana - Urban
- Housing for all by 2022
- Smart Cities Mission
- Hriday - National Heritage City Development and Augmentation Yojana
- Amrut (Atal Mission for Rejuvenation and Urban Transformation)

□ **Miscellaneous Schemes**

- Jeevan Praman
- Digilocker
- Bharatnet Project (National Optical Fibre Network)
- INSPIRE (Innovation in Science Pursuit for Inspired Research)
- SAKAAR
- Digital India
- Namami Gange Project (Integrated Ganga Conservation Mission Project)
- Ganga Gram Yojana
- Jal Kranti Abhiyan
- Khelo India
- One Rank One Pension Scheme
- PRAGATI (Pro-Active Governance and Timely Implementation)
- Indian Community Welfare Fund (ICWF)

**Inclusive growth**

- Measurement criteria
- Government initiatives for inclusive growth
- Basic Amenities: Housing/Drinking Waters/ Sanitations
- Sustainable Development

**Rural Development**

- Rural development and poverty alleviation
- Review of the Existing Programmes
- Development Administration
- Panchayati Raj
- Agriculture and Rural Development

**CONTEMPORARY ISSUES**

- Countering Disinformation and Hate Speech Online
- Sanitation and Nutrition Linkage
- Child Trafficking
- Urban Mega Crisis and Alternative Transport
- Marital rape, an indignity to women
- Caste Census in the times of changing social equations
- The ripple effect of gender inclusivity on India's economy
- COVID-19 and Orphans
- Gender technology gap: needs of a feminist approach to technology
- Issue of Marriageable Age for Women
- Symbolism of Inter Caste Marriages
- Medical Termination of Pregnancy
- Violence against women
- Tech for Tribals
- South Asian Migrant Crisis
- Climate change is already damaging health of children, says Lancet report
- Global Social Mobility Index

- Project Samarthan
- Female Health and Hygiene Programmes - Khushi and Ujjawala Sanitary napkin initiatives
- Bharatiya Poshan Krishi Kosh
- School Education Quality Index
- Samagra Shiksha Abhiyan
- 'The Pulse Polio Programme'
- STRIDE
- "Kerala bans CFL and filament bulbs"
- "Addition of 3 Endangered Indian Species to the Global Conservation List"
- 'Migrant Policy Index'
- "Lassa fever"
- National Education Policy 2020
- Women in Armed Forces'
- 'CAG Survey Report on School Toilets'
- 'Law against sexual harassment at work'
- SC on Prohibition of Child Marriage Act, 2006'
- Disabled are entitled to the same benefits of SC/ST quota: Supreme Court

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# POLITY

## Historical Evolution & Features

- Importance of Constitution
- Historical evolution of the Constitution
- Constituent Assembly
- Objectives of the Constitution
- Salient features of Indian Constitution
- Unitary features
- Federal features
- Parliamentary form of government
- Presidential form of government
- Parliamentary vs. Presidential system of government

## Preamble

- Preamble
- Basic features
- Value premises of constitution
- Terminologies as: 
  - ▶ Democratic
  - ▶ Sovereign
  - ▶ Socialist
  - ▶ Secular
  - ▶ Republic
  - ▶ Justice
  - ▶ Equality
  - ▶ Liberty
  - ▶ Fraternity
  - ▶ Integrity
- Amendability of the Preamble

## Citizenship

- Basic constitutional features
- Methodology of getting citizenship
- Modes of Losing the Citizenship of India
- Concept of dual citizenship
- Citizenship provisions in J&K

- Special privileges enjoyed by citizens in India
- Overseas Citizens of India (OCI) and Persons of Indian Origin (PIOs)

## Fundamental Rights

- Significance of Fundamental Rights
- What is State?
- Right to Equality
- Right to Freedom
- Right against Exploitation
- Right to Freedom of Religion
- Cultural and Educational Rights
- Right to Constitutional Remedies
- Fundamental Rights and Armed Forces
- Martial Law & Fundamental Rights
- Difference between procedure established by law and due process of law
- Writs and their uses
- Restrictive limitations on fundamental rights
- Rights outside Part III of the Constitution
- Dynamic Nature of Article 32
- Need of Revitalizing Indian Reservation System

## DPSP

- Basic features
- Directives
- Economic and Social DPSP
- Gandhian DPSP
- Administrative DPSP
- DPSP related to International Peace
- Implementation of DPSP
- Fundamental Rights and the Directive Principles of State Policy Controversy
- Directives outside Part IV of the Constitution

- Application of Uniform Civil Code in India
- ▢ **Fundamental Duties**
  - Features
  - Link of Fundamental Rights and Fundamental Duties
- ▢ **Other Principles**
  - Process of law making in India
  - Role of Constitutional and extra constitutional bodies in law making
  - Basic structure: How it evolves?
  - Different types of majorities required in Indian Constitution
  - DPSP v. Fundamental Rights
  - Doctrines & Terminologies
- ▢ **Separation of Powers**
  - Features in American and UK Constitution
  - Checks and balances provisions in Indian Constitution
  - Judicial Review
  - Concept of Separation of Powers
- ▢ **Comparison of the Indian constitutional scheme with that of other countries**
  - It should cover Comparison of USA, UK, India and neighbours
- ▢ **Union & States**
  - State Reorganization Commission (brief)
  - Components of Indian territory
  - Process of formation of new states
  - Zonal Councils
  - Union territories
  - Special provisions for states
  - Scheduled and Tribal Areas
- ▢ **Functions and responsibilities of the Union and the States**
  - Regulating functions of Government
  - Development functions of government
  - Service providing functions of government
  - Problems in implementation
  - Recommendations for improvement
  - Interrelationship between union, state and local government in implementation of roles
- Constitutional provisions related to financial devolution
- Issues of financial devolution
- ▢ **Issues and challenges pertaining to the federal structure**
  - Administrative relations
  - Legislative relations
  - Financial relations
  - Emergency Provisions and Misuse of Article 356
  - Inter-State relations
  - Issues related to Union List, State List & Concurrent List
  - Issues related to appointment of Governor
  - Issues related to state formation
  - Poor devolution of finances
  - Reserving bill for Presidential approval
  - Central sponsored schemes and issues
  - Special package for different states
  - Issues between Centre and State after 1990 reforms
  - Foreign policy and Centre and State Relations
  - Inter-State border disputes
- ▢ **The President**
  - Importance of President
  - Qualification
  - Election procedure
  - Advantages and disadvantages of single transferable form of voting
  - Presidents' Term of Office and emoluments
  - Executive Powers
  - Legislative Powers
  - Emergency Powers
  - Financial Powers
  - Miscellaneous powers
  - Judicial powers
  - Presidents Impeachment
  - President as nominal head
  - Ordinance making power
  - Passage of bills
  - Misuse of emergency provisions
  - Pardon power
  - Coalition government
- ▢ **Vice President**
  - Office of the Vice-President

- Functions
- Comparison between Indian VP and American VP
- **Prime Minister**
  - Appointment of PM
  - Functions of PM
  - Role of PM with respect
  - CoM
  - President
  - Lok Sabha
  - Political Party
  - Coalition Government
- **Council of Ministers**
  - Division of CoM
  - Role of CoM
  - Role of Cabinet
  - Responsibilities of the Ministers
- **Attorney General of India**
  - Qualification
  - Functions
  - Powers with respect to parliament
- **Parliament**
  - Composition of Rajya Sabha
  - Composition of Lok Sabha
  - Composition of Legislative assembly and Legislative Council
  - Qualification and disqualification of MPs and MLAs
  - Vacation of seats
  - Sessions of parliament
  - Law making procedure
  - Officers of Parliament and state legislature
  - Parliament Proceedings
  - Motions and resolutions in Parliament
  - Powers and Privileges
  - Financial proceedings
  - Comparison of Lok Sabha and Rajya Sabha
  - Comparison of Legislative assembly and council
  - Women reservation in Parliament and issues
  - Lowering of Parliamentary powers
  - Parliamentary committees and their working

- Judicial activism and Parliament
- Delegated legislation and issues
- **The Judiciary**
  - Integrated judicial system
  - Supreme Court
  - Composition
  - Independence of Supreme Court
  - Jurisdiction of SC
  - Judicial Review
  - High Court
  - Composition
  - Terms and removal
  - Jurisdiction
  - Other powers
  - Lower judiciary
  - Appointment
  - Powers
  - Tribunal & Subordinate Courts
  - The role of the Supreme Court of India as guardian of the Constitution and protector of Fundamental Rights
  - Judicial Review
  - PIL
  - Judicial Activism
  - Judiciary appointment
  - Collegiums System
  - NJAC Controversy
  - National Court of Appeal
  - Judicial Accountability
  - Issues of corruption in judiciary
  - Role of Women in Judiciary
  - Need for Virtual Courts
- **Ministries and Departments of the Government**
  - Functioning of Ministries
  - Central Secretariat
  - Cabinet Secretary
  - Field organizations
  - Reforms needed
  - International methodology
- **Local Government**
  - Provisions of 73rd AA and 74th AA
  - Role and functions of different tiers
  - Municipal Corporations
  - Municipal Councils
  - Nagar Panchayats

- The steps taken towards women's empowerment
- Role of State Election commission
- Role of State Finance Commission
- Smart City Mission & Municipal Governance
- Model Panchayat Citizens Charter Framework
- ▣ **Dispute redressal mechanisms and institutions**
  - What is Dispute redressal mechanism?
  - Need of Dispute redressal mechanisms
  - Administrative tribunal and issues
  - Fast Track Courts and issues
  - Gram Nyayalayas and issues
  - Parivarik Mahila Lok Adalats and issues
  - Family Courts and issues
  - Lok Adalat and issues
  - NALSA and issues
  - Dispute redressal for Weaker section
  - Arbitration Mechanism
  - International Arbitratory Centre
  - Commercial Court
- ▣ **Comptroller And Auditor-General Of India**
  - Appointment
  - Functions
  - Role of CAG in good governance
- ▣ **The Governor**
  - Appointment, term of office, qualification, etc.
  - Powers
  - Discretionary powers
  - Ordinance making power
  - Pardoning power of the Governor
- ▣ **CM**
  - Appointment
  - Powers and responsibilities
  - Relationship between the Governor and the Chief Minister
  - Relationship between CoM and the Chief Minister
- ▣ **The Advocate-General for the State**
  - Appointment
  - Functions
- ▣ **State legislature**
  - The composition of Vidhan Sabha and Vidhan Parishad
  - Qualifications of the Members of Legislature
  - Powers and Functions of State Legislature
  - Relationship between both the Houses
  - Officers of State Legislature
  - Powers, Privileges and Immunities of State Legislatures and their Members
  - Legislative procedure
  - Governor's assent to Bills
  - Procedure in Financial Matters/Budget
- ▣ **Constitutional Bodies**
  - Election Commission
  - Union Public Service Commission
  - State Public Service Commission
  - Finance Commission
  - GST Council
  - National Commission for SCs and STs
  - Special Officer for Linguistic Minorities
  - Advocate General of State
- ▣ **Non-Constitutional Bodies**
  - NITI Aayog
  - National and State Human Rights Commission
  - Central and State Information Commission
  - Central Vigilance Commission
  - Central Bureau of Investigation
  - Lokpal and Lokayukta
- ▣ **Various Constitutional Dimensions**
  - Co-operative Societies
  - Official Languages under the Indian Constitution
- ▣ **Political Dynamics**
  - Provisions related to Political Parties
  - Rise of Regional Parties in India
  - Election Laws and Electoral Reforms in India
  - Importance of NRI votes in Indian Election System
  - Tenth Schedule of the Indian Constitution

# CONTEMPORARY ISSUES

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>◦ Women in Judiciary <input type="checkbox"/></li> <li>◦ 'Can Non Resident Indians (NRIs) cast their vote in India?' <input type="checkbox"/></li> <li>◦ Speedy Trial is a Fundamental Right: SC <input type="checkbox"/></li> <li>◦ "Right to be Forgotten" <input type="checkbox"/></li> <li>◦ Shifting health to Concurrent List <input type="checkbox"/></li> <li>◦ Personal Laws versus Gender Justice: Will a Uniform Civil Code Solve the Problem? <input type="checkbox"/></li> <li>◦ The Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules 2021 <input type="checkbox"/></li> <li>◦ Right to protest and Ethics <input type="checkbox"/></li> <li>◦ 'The unrest on the Assam-Mizoram border' <input type="checkbox"/></li> <li>◦ Virtual Courts and Way forward <input type="checkbox"/></li> <li>◦ Preventive Detention: A necessary evil? <input type="checkbox"/></li> <li>◦ UAPA and the growing crisis of judicial credibility in India <input type="checkbox"/></li> <li>◦ Karnataka Government seeks quota for locals <input type="checkbox"/></li> <li>◦ NGOs foreign contribution financing <input type="checkbox"/></li> <li>◦ Recusal in Judiciary <input type="checkbox"/></li> <li>◦ Simultaneous Elections <input type="checkbox"/></li> <li>◦ Lacunas in Parliamentary functioning in India <input type="checkbox"/></li> <li>◦ Freebies Politics in India <input type="checkbox"/></li> <li>◦ Does Social Media Threaten Democracy? <input type="checkbox"/></li> <li>◦ Political Manipulation Threatens Free Press <input type="checkbox"/></li> <li>◦ Tribunals Reforms Bill, 2021 <input type="checkbox"/></li> </ul> | <ul style="list-style-type: none"> <li>◦ 'Article 32 and its ever changing interpretation' <input type="checkbox"/></li> <li>◦ Coalition Government as strengthening force to democracy <input type="checkbox"/></li> <li>◦ Daughter's equal right to ancestral property: SC' <input type="checkbox"/></li> <li>◦ 'Concern about democracy in the digital age' <input type="checkbox"/></li> <li>◦ National Company Law Appellate Tribunal (NCLAT) <input type="checkbox"/></li> <li>◦ 'The unrest on the Assam-Mizoram border' <input type="checkbox"/></li> <li>◦ Internet shutdowns <input type="checkbox"/></li> <li>◦ How a language is declared 'classical' in India, what benefits it enjoys? <input type="checkbox"/></li> <li>◦ 'Armed Forces Tribunal' <input type="checkbox"/></li> <li>◦ "Unparliamentary" speech and conduct in Parliament' <input type="checkbox"/></li> <li>◦ "Criminalisation of Politics" <input type="checkbox"/></li> <li>◦ 'New Rules for Postal Ballot' <input type="checkbox"/></li> <li>◦ 'Government plans to bring social security schemes under one umbrella' <input type="checkbox"/></li> <li>◦ 'Private Property is a human right: SC' <input type="checkbox"/></li> <li>◦ Uniform Civil code - the debate, the status <input type="checkbox"/></li> <li>◦ e-Lok Adalats <input type="checkbox"/></li> <li>◦ Centre-State disputes and Article 131 <input type="checkbox"/></li> <li>◦ 'National Recruitment Agency' <input type="checkbox"/></li> <li>◦ How the Centre's planned Sanskrit universities will function? <input type="checkbox"/></li> <li>◦ Postal Ballot System <input type="checkbox"/></li> <li>◦ Promoting Tribals of India <input type="checkbox"/></li> <li>◦ Section 188 of IPC <input type="checkbox"/></li> <li>◦ 'Abolition of Legislative Council' <input type="checkbox"/></li> </ul> |
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# GOVERNANCE

## Need and importance of Government Policies

- Growth and development
- Human development and human capital formation
- Equality (interpersonal and interregional) and social justice
- Unity and integrity
- Trust between state and citizens
- Governance: Meaning and Scope
- Good Governance
- Contemporary debate around Governance and Good Governance
- Governance and emerging areas (4th Industrial revolution and related technologies, gender issues, Ethical Governance, Environmental Governance)

## Effective Implementation

- What is effective implementation? Best outcomes in view of given time, resources and constraints
- Outcome orientation in implementation
- Programme impact assessment
- Analysis of different important schemes

## Government intervention

- Good Governance-Role of institutions, bureaucrats and other stakeholders
- Transparency and accountability
- Optimum use of resources- Right targeting, plugging leakages and wasteful expenditure, use of available knowledge, research and innovation.
- Monitoring and evaluation- Outcome budget, zero base budgeting, input-output analysis, cost-benefit analysis
- Setting up institutions and regulatory norms task forces, steering committees and review committees.

- Interventions in emerging areas- Social Media, Data, Privacy, Social Sector

## Development process and industry

- Difference between Growth and Development
- Main Constraints of development
- Main Stake holders in development process
- Self Help Groups
- Meaning
- Importance
- Objectives
- Institutional Structure and organization
- Funding
- SHGs and Women Development
- Women Development and Women in Development dynamics
- SHGs and poverty
- SHGs and Rural Development
- Micro Finance
- Meaning and importance
- Objectives
- Structure and Organization
- Advantages
- Micro Finance in India
- Non-Government Organizations
- GONGOs
- What are NGOs?
- Difference between Non Government Organizations (NGOs) and International Non Government Organizations (INGOs)
- United Nations Criteria for INGO and NGO
- NGOs and development projects
- NGOs and Community development
- NGOs involved in relief and rehabilitation

- NGOs involved in disaster management
- NGOs and advocacy
- **Important aspects of governance, transparency and accountability**
  - Citizen centric governance
  - Features of good governance
  - Legislative accountability
  - Administrative accountability
  - Judicial accountability
  - Ombudsman
  - Whistleblowers concept
  - Anti corruption machinery
  - Role of citizens
  - Role of media
  - Social audit
  - Systematic reforms
  - Social Media and Accountability/ Transparency/Governance
  - Decentralisation
  - Delegation
  - Delegation vs decentralisation
  - Bottom-up governance
- **e-Governance**
  - Introduction
  - Applications
  - Models
  - Successes
  - Limitations
  - Future prospects
  - E-Government
  - Dashboards and Portals of E-governance and E-government- Uses/Impact/Analysis
  - Democracy and E-governance
  - E governance and Judiciary
  - E governance and Legislatures
- **Citizens Charters**
  - Citizens Charters
  - Introduction
  - Models
  - Features
  - CC in India
  - Issues in CC implementation
  - Reform needed
  - Sevottam Framework
  - Citizens and Citizens Charters

- **Role of civil services in a democracy**
  - Concept of civil services
  - Need for civil services
  - Different role of civil services
  - Law making
  - Policy formulation
  - Policy implementation
  - Policy evaluation
  - Civil services as protector of democracy
  - To protect minorities (religious and linguistic)
  - To promote Inclusive and sustainable growth
  - Civil Services – Democracy dynamics
  - Civil Services in eras- Post independence/ Post-LPG / in 21st century
  - Emerging challenges for Civil Services
  - Reforms- Lateral Entry
  - Capacity building of Civil Services (Past to Present)
  - Autonomy
  - Frequent transfers and security of tenure- concept/ benefits/ analysis
  - Cadre Policy
  - Performance Appraisal and HR policies for Civil Services
  - Civil Services Board
- **Pressure groups and formal/ informal associations and their role in the Polity**
  - What are pressure groups?
  - Types
  - The significance of pressure groups in India
  - Differentiate between a pressure group and a political party
  - Evaluation of pressure groups role
  - Pressure groups and new media
  - Politicisation of Pressure Groups
  - Role of pressure groups in governance
  - Issues, pros, cons, challenges for Pressure Groups
- **Appointment to various Constitutional posts, powers, functions and responsibilities of various Constitutional Bodies**
  - Appointment of CAG (procedure of appointment)- composition of CAG



- Functions and responsibilities of CAG
  - Powers and privileges of CAG (provided by constitution and different ACTs of Parliament.)
  - Appointment of ECI (procedure of appointment)- composition of ECI
  - Functions and responsibilities of ECI
  - Powers and privileges of ECI (provided +by constitution and different ACTs of Parliament)
  - Appointment to UPSC (procedure of appointment)- composition of UPSC
  - Functions and responsibilities of UPSC
  - Powers and privileges of UPSC (provided by constitution and different ACTs of Parliament.)
  - Appointment to Finance commission (procedure of appointment) -composition of Finance commiss
  - Functions and responsibilities of Finance commission
  - Powers and privileges of Finance commission (provided by constitution and different ACTs of Parliament.)
  - National commission for SCs and STs.
  - Other bodies- NGT, NHRC etc
  - Evaluation of Each body: History/ Evolution/ Pros/ Cons/ Issues/ Challenges / Way Forward
- Statutory, Regulatory and various Quasi-Judicial Bodies**
- SEBI
  - CVC
  - CBI
  - Planning Commission
  - NDC
  - PMO
  - Zonal Council
  - TRAI
  - NCLAT
  - IRDA
  - National Human Rights Commission
  - State Human Rights Commission
  - Central Information Commission
  - State Information Commission
  - National Consumer Disputes Redressal Commission
  - Tribunal
  - Medical Council Of India
  - Pension Fund Regulatory and Development Authority
- Biodiversity Authority Of India
  - Press Council Of India
  - Forward Markets Commission
  - Inland Waterways Authority Of India
  - RBI
  - Evaluation of Each body : History/ Evolution/ Pros/ Cons/ Issues /Challenges / Way Forward
- Elections in India**
- Salient features of the Representation of People Act, 1950
  - Salient features of Representation of Peoples Act, 1951
  - Electoral reforms
  - Criminalization of politics
  - Negative or neutral voting
  - State funding of Elections
  - Irregularities in polling
  - Electoral Bonds
- Political Parties in India**
- Political parties in India
  - Party reforms
  - Problems in the working of parties
  - Casteism and politics
  - Reforms in Party system in India
  - Strengthening of Anti-defection measures
  - Coalition Governments and dynamics
- Role of Pressure Groups**
- Types of pressure groups
  - Role of pressure group in developing countries
  - Functions of pressure groups in India
  - Pressure groups methods
  - Pressure groups and Democracy
  - Criticism of pressure groups
- Local Government and Governance**
- Issues of Funds, Functions and Functionaries.
  - Local Government and Vulnerable Sections (SC/ST/OBC/Women/ Transgenders/Migrants/Children/ Disabled etc)
  - Local Government and emerging issues (Disaster management, Technology)
  - Localism

- Neo-Localism
- Subsidiarity
- **Vulnerable Sections ( issues/ challenges/ solutions/Laws/ Interventions)**
- SC
- ST
- OBC
- Migrants
- Women
- Disabled
- Children
- Refugees
- Transgenders
- LGBT
- Manual Scavengers
- People with Special needs etc
- **Poverty, Hunger and Health (Evaluation/ issues/ challenges/ solutions/committees/ commissions/ Programs/ institutions/ international comparisons)**
- Poverty
- Hunger
- Health
- Malnutrition

- Unemployment
- Distress Migration
- Schemes- MGNREGA, PM\_POSHAN, Ayushman Bharat etc
- Policies-NHP, NEP etc
- **Miscellaneous**
- 'Concern about democracy in the digital age'
- Indices and Rankings – Domestic and International (Eg Global Hunger Index, NITI Ayyog's, NIRF etc)
- Reports- Domestic/international/ governmental/Independent
- Internet shutdowns
- Committees and Commissions (Findings/recommendations/ Anlaysis)
- Co-operatives
- MSME
- One nation one ration card
- One district one product
- Aspirational districts
- Sustainable Development Goals and India
- Entitlement portability
- Fake news, Hate speech
- Recent interventions (Eg. Laws- Privacy/ Crypto currency/ Uniform Civil Code/ Termination of Pregnancy etc. Eg Rules : IT rules- regulating the OTT and Digital Media)
- Missions (Jal Jeevan mission/ Gati Shakti etc)

## CONTEMPORARY ISSUES

- Frequent Transfers of Public Servants
- More Decentralized form of Governance Model in India
- Criminal Justice System – Problems and Solutions
- Ministry of Co-operation
- One Nation One Ration Card
- 'Federalism and Interstate River Water Governance in India'
- Ayushman Bharat Digital Mission (ABDM)
- One District One Product: A Potential Gamechanger for Northeast Economies'
- E-Gram Swaraj Portal

- Mission Karmayogi
- Medical Termination of Pregnancy (Amendment) Act, 2021
- The Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules 2021
- Concern about democracy in the digital age
- Jal Jeevan mission
- Moral Policing
- Impact of gender reservation in Indian Urban Local Bodies (ULB)
- The changing need of Education in India

# INTERNATIONAL RELATIONS

## 1. Evolution and Key Principles of Indian Foreign Policy

### Indian Foreign Policy

- Determinants of India's Foreign Policy
- Factors determining India's Foreign Policy
- Non-Aligned Movement
- NAM 2.0
- Panchsheel
- India's Nuclear Doctrine
- Evolution of Neighbourhood Policy
- Look East Policy
- Act East Policy
- Look West Policy

### Indian Diaspora

- Role played by Indian Diaspora
- Issue of safety of Indians abroad
- Schemes for Welfare of Overseas Indian

## 2. Bilateral Relations

### 2.1 India & Neighbours

#### India – Nepal Relations

- Background of Relation
- Cooperation between India & Nepal
- Contentions in relations between India & Nepal
- The Issue of Water and Hydropower Cooperation
- Recommendations to Improve Relations
- External Influences

#### India and Bhutan

- Economy: A Broad Overview

- India, Bhutan and China: issues
- The Recent Landmark visit by Indian Prime Minister

#### Indo-Afghan Bilateral Relations

- A Long History of Bilateral Relations
- The India-Afghanistan Development Partnership
- Strategic factors undergirding India's Partnership with Afghanistan
- Afghanistan after NATO Withdrawal
- Options for India

#### India-Bangladesh Relations

- Development Partnership
- India-Bangladesh Relations in line with 'Look East' policy
- Boundary Agreements
- Teesta River Dispute

#### India-Maldives Relations

- Geostrategic Importance of Maldives
- Development Cooperation
- Security Risks

#### India-Sri Lanka Relations

- Commercial Relations
- Developmental Cooperation
- Fishermen Issue

#### India-Myanmar Relations

- Relation through ages
- Recent change in policy
- China Role

#### Indo-Pak Relations

- Cooperation between India & Pakistan
- Major Crisis

- Water Dispute
- Issue of Terrorism and Proxy Wars
- ▢ **Indian – Russia**
- Cooperation between India and Russia
- Strategic Cooperation
- Major Concerns
- Russia - China
- ▢ **Indo-China Relations**
- Economic Relation
- China India Water Related Issue
- "String of Pearls Strategy"
- China's Maritime Silk Route Implications for India
- Militarisation of Belt and Road Initiative (BRI)
- Confidence Building Measures (CBMs)
- Boarder Disputes
- ▢ **South China Sea Dispute**
- Main Disputes
- Resources as a Driver of Competition
- Attempts for Resolution
- India and South China Dispute
- ▢ **Security Challenges in the Indian Ocean Region**
- The Pivot to Asia – US Policy Shift
- South China Sea- Issues of Mistrust
- Piracy off the Coast of Somalia
- Neighbourhood Issues and Terrorism
- Energy Routes
- Fisheries and Livelihood Issues
- Environmental Security
- Declaration of Indian Ocean as Zone of Peace
- India and Asian Nations relations

**2.2 India & Asian Nations relations**

- ▢ **CIS Countries of Central Asia**
- India-Turkmenistan
- India-Kazakhstan
- India Tajikistan
- China And Central Asia
- International North-South Transport Corridor

- Shanghai Cooperation Organisation
- ▢ **India-Mongolia**
- India-Mongolia Bilateral Cooperation
- Deal on Uranium Supply
- ▢ **India – UAE Relations**
- Political and economic relation
- Oil Economic Relation
- ▢ **India – IRAN**
- Iran Nuclear Deal and India
- India Iran Relations
- US-Geopolitical and Geo-Economic Consideration in Iran
- ▢ **India – ISRAEL**
- Israel and Palestine Conflict
- India – Israel Relations
- ▢ **India – Saudi Arabia**
- Areas of Cooperation
- Challenges in relations
- ▢ **Asia-Pacific Region**
- Zones of Activity
- Regional Groupings
- Geopolitics of Asia Pacific
- ▢ **India-South East Asia**
- Steps in Indo-ASEAN Relations
- India-ASEAN Security Co-operation
- ▢ **Indo-Japan Bilateral Relationship**
- Economy Centric Relationship
- Contemporary Perspective
- ▢ **India – South Korea**
- India South Korea Relations
- Economic Partnership in Recent Years
- ▢ **India-Vietnam**
- Economic Cooperation
- Strategic Cooperation
- Geo-political Issues concerning India-Vietnam Energy Cooperation
- China's Response
- India's Response

**2.3 India & Other Nation****India and Africa**

- Historical Connections
- Gandhi's Role
- Nehru's Role
- Strengthening of Ties
- South-South Engagement
- Current Dynamics
- Economic Cooperation
- Human resources development and capacity building
- Energy Cooperation
- Military Security Co-operation
- Trade Policy
- Afro-Indian Trade
- Indian investment in Africa
- African investment in India
- Development cooperation and assistance

**Indo-Australia Relationship**

- Immigration Issue and Indian Diaspora
- Economic Relationship
- Issue of Nuclear Cooperation

**France**

- Strategic Partnership
- Prime Minister's Recent Visit to France

**Germany**

- Indian-Germany Economic Relations

**United Kingdom**

- India & UK Relations
- Brexit
- India & BREXIT

**India-USA Relations**

- Area of Co-operation: Strategic Consultations
- Area of Co-operation: Counter terrorism and Internal Security
- Area of Co-operation : Trade and Economic
- Area of Co-operation: Energy and Climate Change
- Area of Co-operation: Science & Technology (S&T) and Space
- Area of Co-operation: People to People Ties

- Area of Co-operation: Defence Cooperation
- Intellectual Property Issues
- India and International Organisations
- Indo-Pacific Relations
- Quadrilateral Security Dialogue (QUAD)
- India and Generalised System of Preference (GSP)

**3. Multilateral Relations****The World Trade Organization**

- Representation in the WTO and Economic Groupings
- How the WTO takes Decisions
- The WTO Secretariat and Budget
- How Countries Join the WTO
- Assisting Developing and Transition Economies
- Specialized Help for Export Promotion
- The WTO's Part in Global Economic Policy-making
- Nairobi Package
- WTO and protectionism
- WTO and IPR
- WTO reforms
- WTO and India
- WTO and Agriculture Issues of developing nations
- WTO and Free Trade Agreements (FTAs)

**International Monetary Fund**

- International Monetary Fund (IMF)
- IMF Reforms

**Nuclear Security**

- Nuclear Security Summit
- Threats of Nuclear Terrorism
- Missile Technology Control Regime (MTCR)
- Nuclear Suppliers Group (NSG)
- NSG Membership for India
- Nuclear Non-Proliferation Treaty (NPT)

**BRICS**

- Economic Environment in BRICS Countries
- BRICS-BIMSTEC
- BRICS & India

**BIMSTEC**

- BIMSTEC & India
- Convention on Mutual Legal Assistance in Criminal Matters

**IBSA**

- IBSA Potential
- Need for Revitalizing IBSA
- India's Policy Options
- Technological Collaboration

**SAARC**

- Prospects For SAARC
- Indo-Pak Conflict
- Problem of Resource Development

**India-ASEAN Economic Cooperation**

- Singapore
- Vietnam
- Indonesia
- India ASEAN FTA in Service

- United Nations Security Council (UNSC)
- India & UNSC
- Economic and Social Council
- International Court of Justice (ICJ)
- UN Specialised Agencies
- Food & Agriculture Organization (FAO)
- International Civil Aviation Organization (ICAO)
- International Labour Organization (ILO)
- International Maritime Organization (IMO)
- International Telecommunication Union (ITU)
- United Nations Educational, Scientific and Cultural Organization (UNESCO)
- International Fund for Agricultural Development (IFAD)
- World Health Organization (WHO) and Question over its Credibility
- World Meteorological Organisation (WMO)
- WIPO
- World Bank
- International Monetary Fund (IMF)

**4. Global Institutions**

- United Nations & its Bodies
- Structure of United Nations
- United Nations General Assembly (UNGA)

**5. Important Key Concepts**

- New World Order
- Dynamics of New World Order
- New Cold War?

**CONTEMPORARY ISSUES**

- The Pandemic Induced BRI: Then, Now and What Next?
- China's first railway link to Indian Ocean
- Minilateralism: Weighing the Prospects for Cooperation and Governance
- Why the US has changed its mind on Nord stream 2 pipelines?
- US in Afghanistan
- On the Quad, define the idea, chart a path
- AUKUS Security Alliance
- Teesta Dispute and India-Bangladesh Relations
- BIMSTEC needs to reinvent itself
- India and Sri Lanka re-injects

- pragmatism into bilateral relations
- Myanmar's Protest and what led to Military Coup in Myanmar
- Arctic Ocean and its Relevance
- Continuity in India's ties with Central Asia
- Gilgit-Baltistan: An Integral Part of India
- India's Foreign Policy
- India and RCEP
- EU-China deal: short-sold by EC, a reversal ahead
- India, UAE formally launch CEPA negotiations
- Tibet returns as fulcrum point between US and China

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| ◦ US, Japan, Australia reviving 'Blue Dot'                         | <input type="checkbox"/> | ◦ Virtues of Soft Power  | <input type="checkbox"/> |
| ◦ India should have permanent seat in UN Security Council, says US | <input type="checkbox"/> | ◦ China's Presence in Arabian Sea & its Implications on India                  | <input type="checkbox"/> |
| ◦ Maritime Opportunities for India-France -Japan Trilatera         | <input type="checkbox"/> | ◦ The Refugee Crisis   | <input type="checkbox"/> |
| ◦ Need for Reforms in UN   | <input type="checkbox"/> | ◦ India' Advancement in Defence Technology and its Impact on "Act East Policy" | <input type="checkbox"/> |

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# ECONOMY

## BASIC ECONOMY

### Indian Economy and issues relating to planning

- Indian Economy in Pre-independence Period
- Economy on Eve of Independence
- Challenges
- Features
- Post-Independence India
- Issues
- Agriculture and its development so far
- Industry
- Services
- Phases of Economic Development in India
- Nehruvian Socialist Economy
- Economic Reforms
- Planning
- Objectives
- Planning History
- Analysis of each plan
- Growth & Development 
  - ▶ Economic Growth in India: 
    - ◆ National Income Determination
    - ◆ GDP
    - ◆ GNP
    - ◆ NDP
    - ◆ NNP
    - ◆ Personal Income
  - ▶ Economic Growth versus Economic Development
  - ▶ Measures of Economic Development 
    - ◆ Rise in real per capita income

- ◆ Real gross national product
- ◆ Human development index
- ◆ GDP
- ◆ Gender-related development index
- ◆ Poverty index
- ▶ Economic and Social Development in India: Millennium Development Goals
- ▶ Sustainable Development Goals and India
- Employment

### Resource Mobilization

- Types of resources: Physical capital and finance capital
- Need for resource mobilization- Police State and Democratic Welfare State
- Sources of resource mobilization: Public Sector and Private Sector
- Savings and investment over the five year plan
- Budgetary resources: Tax and Non tax
- Role of Public Debt in resource mobilization and effects: Market borrowing, loans, grants, etc.
- Role of fiscal and monetary policies in resource mobilization
- Role of foreign investment in resource mobilization, desirability and consequences
- Multilateral agencies and resource mobilization

### Inclusive growth and issues arising from it

- Meaning and concept of Inclusion
- India's experience
- Social sector initiatives and inclusion process



- Ground reality and working of flagship schemes
  - India's growth story in this context
  - Rural economy based growth
  - Need of Sustainable agriculture, food security and resilience for growth.
  - Public distribution schemes: Way to inclusive growth.
  - Financial inclusion as an instrument of inclusive growth.
  - Poverty Alleviation and Employment Generation as a strategy for inclusive growth
  - Social sector development as an instrument for inclusive growth.
  - Public private partnership for inclusive growth
  - Industrial Integration for inclusive growth
  - Sectoral and regional diversification as a tool for inclusive growth.
  - Governmental Schemes and Policies for Inclusive Growth 
    - ▶ Pradhan Mantri Jan Dhan Yojana
    - ▶ MUDRA (Micro Units Development and Refinance Agency) Bank
    - ▶ Self Employment and Talent Utilization (SETU)
    - ▶ Skill India
    - ▶ Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)
    - ▶ Kisan Card
    - ▶ Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)
    - ▶ National Agriculture Market (NAM)
    - ▶ Pradhan Mantri Jeevan Jyoti Beema Yojana
    - ▶ Pradhan Mantri Jeevan Suraksha Yojana
    - ▶ Atal Pension Yojana
    - ▶ Digital India programme
- Government Budgeting**
- Budget, Economic Survey
  - Budget terminology
  - Types of budget
  - Features of outcome budgeting
  - Merger of Railway and General Budget
  - Benefits of budgeting
  - Flaws in budgeting process
  - Budget analysis
  - Subsidy
- Investment Models**
- Need for Investment
  - Sources of Investment
  - Measures of Investment
  - Capital and investment
  - Factors affecting investment
  - Classification of Investment
  - Types of Investment Models
  - Investment Models Followed by India 
    - ▶ Domestic Investment Models 
      - ◆ Public Investment Model
      - ◆ Private Investment Model
      - ◆ Public Private Participation Investment Model
    - ▶ Foreign Investment Models (FDI, FII, etc.)
  - Role of State
  - PPP (Public-Private Partnership)
  - Savings and Investment Trends
- Fiscal policy**
- Fiscal Policy in India
  - Important Budgetary Terms and Fiscal Concept
  - Government Revenues & Spending
  - Deficits and its financing 
    - ▶ Revenue Deficit
    - ▶ Fiscal Deficit
    - ▶ Primary Deficit
  - Balance Sheet
- Taxation**
- Taxation Meaning
  - Principles of Taxation
  - Objectives of Taxation
  - Taxation for Mobilization of Resources
  - Tax System in India
  - Current Taxation Policy of India
  - Subsidies
  - Tax Reforms
  - GST and its progress
  - Retrospective Taxation in India
- 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

■ **Financial system**

- Indian Financial System – An Overview
- Components of Indian Financial System 
  - ▶ Financial Institutions 
    - ◆ Banking Institutions or Depository Institutions
    - ◆ Non-Banking Institutions or Non-Depository Institutions
    - ◆ Others: (Regulatory, Intermediates, Non Intermediates)
  - ▶ Financial Assets (Call Money, Notice Money, Term Money, Treasury Bills, Certificate of Deposits, Commercial Paper)
  - ▶ Financial Services (Banking Services, Insurance Services, Investment Services, Foreign Exchange Services)
  - ▶ Financial Markets (Capital Market, Money Market, Foreign exchange Market, Credit Market)
- Indian financial market and Pandemic

■ **Banking**

- Banking in India: Definition, Structure and Functions
- Origin of Banking system
- Type of Banks in India 
  - ▶ Central Bank (Reserve Bank of India)
  - ▶ Cooperative Banks
  - ▶ Commercial Banks 
    - ◆ Public Sector Banks (State Bank of India)
    - ◆ Private Sector Bank (HDFC Bank)
    - ◆ Foreign Banks (CITI Bank)
  - ▶ Regional Rural Banks
  - ▶ Local Area Banks
  - ▶ Specialized Banks (SIDBI Bank, NABARD)
  - ▶ Small Finance Banks (AU Small Finance Bank)
  - ▶ Payments Banks (Airtel Payment Bank)
- Nationalization of Banks in India
- Banking Sector Reforms in India: Narasimhan Committee 1&2, Nachiket Mor Committee, P J Nayak Committee

- Development Finance Institutions: IFCI, ICICI, SIDBI, IDBI, UTI, LIC, GIC
- New Bank Licence Criteria
- Non-Banking Financial Company (NBFC)
- Financial Inclusion in India: Need and future; PMJDY; Payment Banks and Small Banks
- NPAs
- Bills related to Banking
- NEO BANK
- The emerging concept of Bad Banks
- Insurance sector of India
- Bank privatization
- Account Aggregator System
- Domestic systemically important banks (D-SIBs)

■ **Foreign Trade & International Organisations**

- International Trade
- Trade Policy
- India's Balance of Payments: 
  - ▶ Current Account
  - ▶ Capital Account
  - ▶ Goods and Services Account
- India's BOP Performance: 
  - ▶ Balance of Payment versus Balance of Trade
  - ▶ Current Account versus Capital Account
- Foreign Capital
- Impact of Globalization on Indian Economy
- FDI and FPI in India, External Commercial Borrowings
- Foreign Exchange Rate Determination in India
- Types of Exchange Rate
- Capital and Current Account Convertibility in India
- The Bretton Woods Twins: 
  - ▶ World Bank
  - ▶ International Monetary Fund
- World Bank Group
- World Trade Organisation (WTO) and India
- ADB, NDB, BRICS Bank, AIIB
- Bilateral, Regional and Global Groupings and Agreements involving India
- Important report and forecasts

# AGRICULTURE

## Role of Agriculture in Indian Economy

- Situation of Indian Agriculture
- Historical background and current status
- Cropping Patterns: Types of Cropping Systems: Mono-cropping; Crop Rotation; Sequential Cropping; Inter Cropping; Relay Cropping
- Issues related to direct and indirect farm subsidies and minimum support prices 
  - ▶ Farm Subsidies in India: Definition; Working; Need; Negative Impacts
  - ▶ Types of Farm Subsidies in Indian Agriculture: Irrigation and Power Subsidies; Fertilizer Subsidy; Seed Subsidy; Credit Subsidy
  - ▶ Government Intervention in Indian Agriculture
  - ▶ Minimum Support Prices in Indian Agriculture: MSP definition; Working; Issues; Drawbacks; Way Ahead; Buffer Stocks
  - ▶ Public Distribution System in India: Definition; Issues; Working; Need; Disadvantages
  - ▶ Targeted PDS in India, Antyodaya Anna Yojana (AAY), Alternative to the PDS, Direct Benefit Transfers, National Food Security Act
- Agriculture Marketing
- **Major crops:** Major cropping patterns in different parts of the country, different types of irrigation, transport and marketing of agricultural produce and issues and associated constraints; e-technology for farmers
- Conclusive Land Titling
- Biotech-KISAN Program

## Land resource

- Land-use
- Land capability classification
- Causes of Land Degradation
- Impact of Land Degradation
- Steps taken by GOI
- Sustainable Land Management

## Land Reforms

- Land ownership patterns under the British rule 
  - ▶ Zamindari System (Permanent settlement of Bengal)
  - ▶ Ryotwari System
  - ▶ Mahalwari System
- Land reforms since independence
- Objectives of land reforms in India
- Progress of Land Reforms in India
- Progress of Ceiling Legislation
- NITI Aayog Report on Land Leasing
- SVAMITVA (Survey of Villages and Mapping with Improved Technology in Village Areas)

## Agriculture Finance

- Features of Agricultural Finance
- Criteria for Agricultural Credit
- Need for Agricultural Finance
- Sources of Agricultural Finance
- Problems of Agricultural Finance
- Measures taken to improve credit flow to agriculture
- Co-operative Credit Societies in India
- Derivate Trade in Agriculture Commodities

## Important Schemes

- Pradhan Mantri Kisan Maandhan yojana
- PM-Kisan Scheme
- Paramparagat Krishi Vikas Yojana (PKVY)
- Pradhan Mantri Krishi Sinchai Yojana (PMKSY)
- Rythu Bandhu scheme

## Agricultural Credit Institutions

- Commercial Bank
- Lead Bank Scheme
- Multi Agency Approach
- Regional Rural Banks

- National Bank for Agriculture and Rural Development (NABARD)
- Reserve Bank of India
- Kisan Credit Card Scheme
- Self Help Group (SHG) Bank Linkage Programme
- Rural Infrastructure Development Fund (RIDF)
- Government Policy For Agricultural Credit
- Farmers Service Societies (FSS)
- ▢ **Crop Insurance in India**
  - Historical Background
  - Issues Related to Crop Insurance
  - Pradhan Mantri Fasal Bima Yojana
  - Comparison with Earlier Crop Insurance Schemes
  - Challenges
- ▢ **Important Schemes**
  - Pradhan Mantri Fasal Bima Yojana (PMFBY)
  - Kisan Credit Card (KCC) scheme
  - Soil Health Card Scheme
  - National Mission for Sustainable Agriculture (NMSA)
- ▢ **Agriculture Marketing**
  - Process of Agricultural Marketing in India
  - Structure of Agricultural Marketing in India
  - Importance of Proper Agriculture Marketing
  - Government Measures to Improve Agricultural Marketing in India
  - Analysis of APMC Act
  - National Agriculture Market (e-NAM)
- ▢ **Subsidies**
  - Subsidy in India 
    - ▶ Farm Subsidies
    - ▶ Fertiliser subsidies
    - ▶ Subsidy on power
    - ▶ Subsidy on irrigation
  - Issues related to direct and indirect farm subsidies and minimum support prices
  - Objectives of subsidies

- Transfer of resources from gainers from economic policies to losers from economic policies
- Issues of buffer stocks and food security
- Technology missions
- Economics of animal-rearing.
- Public Distribution System: Objectives, functioning, limitations, revamping, evolution from universal PDS to targeted PDS, Targeted PDS, a critical analysis of cost and benefit of PDS
- Buffer Stock policy and government's intervention in food market to keep prices under reasonable limits to help consumers
- Food Security bill, questions of resource mobilization for the FSB, criticism of the FSB
- Important questions on the future of subsidies
- ▢ **Agricultural Revolutions in India**
  - Green Revolution
  - White Revolution – Operation Flood
  - Yellow Revolution
  - Blue Revolution
  - Golden Fiber Revolution: Jute
  - The future of Indian agriculture
  - Data revolution in Indian agriculture
  - Artificial Intelligence & Agriculture
  - Social Security Schemes for Farmers
- ▢ **Food Processing**
  - **Food processing and related industries:** Scope and significance, location, upstream and downstream requirements, supply chain management.
  - Processed Foods Scenario with respect to Specific Sectors
  - Policy Initiatives
  - Infrastructure Development in Food Processing Sector
  - Issues in Food Processing Sector
  - FDI Policy in Food Processing
  - Notable Trends in the Indian Food Processing Sector
  - Strategies Adopted in Budget
  - New foreign and domestic investment
  - Sector-specific government policies

## INDUSTRY

### Industrial policy and industrial development: Main Issues

- Mahalanobis strategy and India's industrial policy-Discussing Industrial policy resolution 1948 and 1956 critically
- New Economic Policy and Industrial policy under the policy of
- Liberalization
- Privatization
- Globalization
- Phases of Industrial development
- Effects of liberalization on the economy
- Changes in industrial policy and their effects on industrial growth
- Impact on Different Sectors of the Economy

### Main features of Industrial development in India

- Roles of private sector and public sector, Investment in the industrial sector, employment, productivity, profit etc.
- Strategies for disinvestment and privatization

- Role of Small, Medium and Micro enterprises, Government Policy, main problems, effects of globalization
- New Manufacturing Policy
- Industrial disbursement and Industrial corridors
- SEZs- Main issues like land use, relocation of some industries that exist, exports earnings vs loss of tax income
- Industrial sickness, institutional mechanism to support the sick industries, exit policy issues
- Main constraints in the industrial development of India
- Effects of globalization on industries, Sub-prime crisis and sovereign debt crisis on Industry in India
- Industrial Finance in India: Role of development banking, commercial banking, venture capital, angel capital in industrialization and promotion of entrepreneurship
- Make in India achievements
- Transformation of MSME sector and impact on India

## INFRASTRUCTURE

- Impact of Infrastructure-Economic Impacts, impact on social development, Environmental impacts
- Transport 
  - ▶ Ports 
    - ◆ Ocean transport routes
    - ◆ Inland waterways
    - ◆ Main regions of inland waterways
  - ▶ Roads 
    - ◆ Importance
    - ◆ Government push towards Road Infrastructure
    - ◆ National Infrastructure pipeline
    - ◆ Bharatmala Pariyojana
  - ▶ Airports 
    - ◆ Air routes & Significance
    - ◆ Factors influencing air transport

- ▶ Railways 
  - ◆ Railways: Factors affecting the railroads
  - ◆ Distribution of railroads in the world
- ▶ Energy (Pipeline) 
  - ◆ Energy Pipeline Transport
  - ◆ Petroleum (oil) Pipelines
  - ◆ Gas Pipelines
- Importance and development of transport
- Means of transport
- Transport costs and economic distance
- Operating costs in transport
- Government's transport policy
- Transport patterns in the world
- Transport costs and specialization

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| <ul style="list-style-type: none"> <li>○ Transport and trade in the modern era <input type="checkbox"/></li> <li>○ Transport costs and scale economies <input type="checkbox"/></li> <li>○ Falling transport costs increase trade between neighbours <input type="checkbox"/></li> <li>○ Failing transport costs lead to concentration within countries <input type="checkbox"/></li> <li>○ Negative externalities of transport <input type="checkbox"/></li> <li>○ Important issues <input type="checkbox"/></li> <li>○ Ownership and financing <input type="checkbox"/></li> <li>○ Pricing of Public utilities <input type="checkbox"/></li> <li>○ Infrastructure as avenues for investment <input type="checkbox"/></li> <li>○ Project delays-reasons and measures to overcome <input type="checkbox"/></li> <li>○ Public Private Partnership and related issues <input type="checkbox"/></li> <li>○ Operation and Maintenance of roads, railways, irrigation and power projects- Main problems and solutions <input type="checkbox"/></li> </ul> <p><b>○ Important Schemes</b></p> <ul style="list-style-type: none"> <li>○ PM Gati Shakti National Master Plan <input type="checkbox"/></li> <li>○ Mega Investment Textiles Parks (MITRA) scheme <input type="checkbox"/></li> <li>○ National Bank for Financing Infrastructure and Development (NaBFID) to fund infrastructure projects in India <input type="checkbox"/></li> <li>○ National Industrial Corridor Development Programme (NICDP) <input type="checkbox"/></li> </ul> <p><b>○ Recent Development</b></p> | <ul style="list-style-type: none"> <li>○ Pulses for Food Security and Sustainable Future <input type="checkbox"/></li> <li>○ General Insurance Amendment Bill <input type="checkbox"/></li> <li>○ Pandora's papers <input type="checkbox"/></li> <li>○ National Urban Digital Mission <input type="checkbox"/></li> <li>○ 'One District One Product: A Potential Game changer' <input type="checkbox"/></li> <li>○ Proposition 22: The Future of the Gig Economy <input type="checkbox"/></li> <li>○ Central Bank Digital Currency <input type="checkbox"/></li> <li>○ Virtual Currencies <input type="checkbox"/></li> <li>○ Taxing Virtual Currencies <input type="checkbox"/></li> <li>○ G-SAP 1.0: Securities acquisition plan to boost the market <input type="checkbox"/></li> <li>○ G7 Corporate Tax Deal <input type="checkbox"/></li> <li>○ Major reforms in Natural Gas Marketing <input type="checkbox"/></li> <li>○ National Monetisation Pipeline <input type="checkbox"/></li> <li>○ National Mission on Edible Oil <input type="checkbox"/></li> <li>○ Zero defect zero effect scheme <input type="checkbox"/></li> <li>○ World Hunger Index 2021 <input type="checkbox"/></li> <li>○ World Inequality Report <input type="checkbox"/></li> <li>○ India's telecom sector and issues <input type="checkbox"/></li> <li>○ Shifting towards Green Energy <input type="checkbox"/></li> <li>○ Gig Economy and India <input type="checkbox"/></li> <li>○ The State of Food and Agriculture 2021 <input type="checkbox"/></li> <li>○ Fertiliser Shortage in India <input type="checkbox"/></li> <li>○ World Employment and Social Outlook – Trends 2022 report <input type="checkbox"/></li> <li>○ e-Gram Swaraj e-Financial Management System <input type="checkbox"/></li> </ul> |
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## CONTEMPORARY ISSUES

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| <ul style="list-style-type: none"> <li>○ Global Hunger Index 2021 <input type="checkbox"/></li> <li>○ Data revolution in Indian agriculture <input type="checkbox"/></li> <li>○ Bad Bank to Clean up the Balance Sheets <input type="checkbox"/></li> <li>○ Privatization of Banks <input type="checkbox"/></li> <li>○ Conclusive Land Titling <input type="checkbox"/></li> <li>○ 'One District One Product: A Potential Game changer for Northeast Economies' <input type="checkbox"/></li> <li>○ Proposition 22, the future of the gig economy <input type="checkbox"/></li> <li>○ Taxing Virtual Currencies <input type="checkbox"/></li> <li>○ GDP is no longer an accurate measure of growth <input type="checkbox"/></li> <li>○ RBI to introduce Central Bank Digital Currency: deputy governor <input type="checkbox"/></li> </ul> | <ul style="list-style-type: none"> <li>○ What the G7 corporate tax deal means for India? <input type="checkbox"/></li> <li>○ Interim report of 15th finance commission: Continuity and fiscal follow through <input type="checkbox"/></li> <li>○ National Monetisation Pipeline <input type="checkbox"/></li> <li>○ PM Gati Shakti Master Plan <input type="checkbox"/></li> <li>○ Artificial Intelligence &amp; Agriculture- use of ICT in farming <input type="checkbox"/></li> <li>○ Role of NITI Aayog <input type="checkbox"/></li> <li>○ Credit Rating Agencies: Credibility and Accountability <input type="checkbox"/></li> <li>○ Concept of Crypto-Currencies <input type="checkbox"/></li> <li>○ Practice of Agriculture Loan Waiver <input type="checkbox"/></li> <li>○ Consolidation in Banking Sector: Pros &amp; Cons <input type="checkbox"/></li> </ul> |
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| ◦ Women & their role in economy             | <input type="checkbox"/> | economic development '   |                          |
| ◦ Circular Economy: From New to Forever New | <input type="checkbox"/> | ◦ 'Fortification of edible oil with Vitamins A and D'                        | <input type="checkbox"/> |
| ◦ What's next for virtual currency?         | <input type="checkbox"/> | ◦ 'Lessons from the Bangladesh and Vietnam's Growth Story'                   | <input type="checkbox"/> |
| ◦ 'Business Reform Action Plan'             | <input type="checkbox"/> | ◦ 'A secure future for platform workers'                                     | <input type="checkbox"/> |
| ◦ Financial Inclusion Index (FII)           | <input type="checkbox"/> | ◦ 'NITI Aayog announces governing structure of India Energy Modelling Forum' | <input type="checkbox"/> |
| ◦ Essential Commodities Act                 | <input type="checkbox"/> | ◦ RBI to bring startups under Priority Sector Lending (PSL)                  | <input type="checkbox"/> |
| ◦ Gender budgeting                          | <input type="checkbox"/> |  |                          |
| ◦ Regional Cluster concept of               | <input type="checkbox"/> |  |                          |

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# SCIENCE & TECHNOLOGY

## CHEMISTRY

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|--|--------------------------|--------------------------------------|--------------------------|
| ○ Elements and molecules   | <input type="checkbox"/> | ○ Properties of solution             | <input type="checkbox"/> |
| ○ States of Matters  | <input type="checkbox"/> | ○ Chemicals in everyday life         | <input type="checkbox"/> |
| ○ Atomic structure   | <input type="checkbox"/> | ○ Polymers and Biopolymers           | <input type="checkbox"/> |
| ○ Chemical bonding   | <input type="checkbox"/> | ○ Chemistry of Pharmaceuticals       | <input type="checkbox"/> |
| ○ Metals and non-metals  | <input type="checkbox"/> | ○ Carbon and its allotropes          | <input type="checkbox"/> |
| ○ Metallurgy   | <input type="checkbox"/> | ○ Hydrocarbons and their derivatives | <input type="checkbox"/> |
| ○ Acid and base  | <input type="checkbox"/> | ○ Biomolecules                       | <input type="checkbox"/> |
| ○ Applications of electrochemistry<br>(Battery and Charging devices) | <input type="checkbox"/> | ○ Vitamins and Enzymes               | <input type="checkbox"/> |

## PHYSICS

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

## BIOLOGY

- |   |   |
|---|---|
| □ <b>Chemical Building Blocks of Life</b> | □ <b>Diversity of Living Things</b>                           |
| □ <b>History and Origin of Life</b>       | ○ Classification and Domains of Life <input type="checkbox"/> |



○ Viruses	<input type="checkbox"/>	○ Excretion, Osmoregulation and Thermoregulation	<input type="checkbox"/>
○ Prokaryotes	<input type="checkbox"/>	○ The Digestive System	<input type="checkbox"/>
○ Eukaryotes	<input type="checkbox"/>	○ Immune system	<input type="checkbox"/>
○ Protists	<input type="checkbox"/>	<b>○ Nutrition</b>	
○ Plants	<input type="checkbox"/>	○ Classification by Source of Energy and Carbon	<input type="checkbox"/>
○ Fungi	<input type="checkbox"/>	○ Plant Nutrition	<input type="checkbox"/>
○ Animals	<input type="checkbox"/>	○ Animal Nutrition	<input type="checkbox"/>
<b>○ Evolution</b>		○ Human Diet	<input type="checkbox"/>
○ Evolution of Life	<input type="checkbox"/>	<b>○ Plant physiology</b>	
○ Human Evolution	<input type="checkbox"/>	○ Photosynthesis	<input type="checkbox"/>
<b>○ Genetics</b>		○ Respiration	<input type="checkbox"/>
○ Inheritance	<input type="checkbox"/>	○ Plant-water balance	<input type="checkbox"/>
○ DNA and RNA	<input type="checkbox"/>	○ Reproduction	<input type="checkbox"/>
○ Gene Expression	<input type="checkbox"/>	<b>○ Economic Zoology</b>	
○ Gene Regulation	<input type="checkbox"/>	○ Microbes in Human Welfare	<input type="checkbox"/>
○ Mutation	<input type="checkbox"/>	○ Beneficial animals	<input type="checkbox"/>
<b>○ Cells</b>		○ Beneficial insects	<input type="checkbox"/>
○ Cell Structure	<input type="checkbox"/>	<b>○ Economic botany</b>	
○ Membranes	<input type="checkbox"/>	○ Family of angiosperms	<input type="checkbox"/>
○ Cell-Cell Interactions	<input type="checkbox"/>	○ Tissue culture	<input type="checkbox"/>
○ Respiration	<input type="checkbox"/>	○ Grafting	<input type="checkbox"/>
○ Energy and Metabolism	<input type="checkbox"/>	○ Horticulture	<input type="checkbox"/>
○ Cells Division	<input type="checkbox"/>	<b>○ Imaging techniques</b>	
○ Tissues	<input type="checkbox"/>	○ CT scan	<input type="checkbox"/>
○ Epithelial tissue	<input type="checkbox"/>	○ Magnetic resonance imaging	<input type="checkbox"/>
○ Connective tissue	<input type="checkbox"/>	○ Positron emission tomography (PET)	<input type="checkbox"/>
○ Muscle tissue	<input type="checkbox"/>	<b>○ Biological fuel generation</b>	
○ Nervous	<input type="checkbox"/>	○ Generation and significance of fossils fuels	<input type="checkbox"/>
○ Myocardial	<input type="checkbox"/>	○ Biofuels from biomass	<input type="checkbox"/>
○ Hepatic	<input type="checkbox"/>	○ Biodiesel	<input type="checkbox"/>
<b>○ Organ system and Human physiology</b>		○ Natural gas and petroleum	<input type="checkbox"/>
○ Endocrine System	<input type="checkbox"/>	○ Hydrogen	<input type="checkbox"/>
○ Respiratory system	<input type="checkbox"/>		
○ Circulatory system	<input type="checkbox"/>		
○ Skeletal and Muscular Systems	<input type="checkbox"/>		
○ Reproduction	<input type="checkbox"/>		

## BIOTECHNOLOGY

- **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**

## HUMAN 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

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## 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**

## 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**

## NUCLEAR ENERGY

☐ **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

## 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**

## NANO SCIENCE & NANO TECHNOLOGIES

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>▣ <b>Basics of Nan science and Nanotechnology</b></li> <li>▣ <b>Nanomaterial</b></li> <li>▣ <b>Applications of nanotechnology</b> <ul style="list-style-type: none"> <li>○ Nano medicine <input type="checkbox"/></li> <li>○ Semiconductors and computing <input type="checkbox"/></li> <li>○ Food <input type="checkbox"/></li> <li>○ Textiles <input type="checkbox"/></li> <li>○ Sustainable energy <input type="checkbox"/></li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>○ Environment <input type="checkbox"/></li> <li>○ Transport <input type="checkbox"/></li> <li>○ Space <input type="checkbox"/></li> <li>○ Agriculture <input type="checkbox"/></li> <li>▣ <b>Impacts of Nanotechnology</b> <ul style="list-style-type: none"> <li>○ Adverse Health and Environmental <input type="checkbox"/></li> <li>○ Social and Ethical Impacts <input type="checkbox"/></li> </ul> </li> <li>▣ <b>Nano-science and nano-technology in India</b></li> </ul> |
|---|--|

## ROBOTICS AND AI

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>▣ <b>Robotics</b> <ul style="list-style-type: none"> <li>○ Machine vs Computer vs Robots <input type="checkbox"/></li> <li>○ Parts of a Robot <input type="checkbox"/></li> <li>○ Classification of Robots <input type="checkbox"/></li> <li>○ Advantages and Disadvantages of Robot <input type="checkbox"/></li> <li>○ Applications of Robotics in Agriculture, industry, defence, etc. <input type="checkbox"/></li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>▣ <b>AI</b> <ul style="list-style-type: none"> <li>○ Neural networks <input type="checkbox"/></li> <li>○ Machine Learning and Deep learning <input type="checkbox"/></li> <li>○ Application of AI <input type="checkbox"/></li> <li>○ Artificial Intelligence and Robotics <input type="checkbox"/></li> </ul> </li> </ul> |
|--|---|

## IPR

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>▣ <b>IPR</b> <ul style="list-style-type: none"> <li>○ What are Intellectual property rights (IPR)? <input type="checkbox"/></li> <li>○ Types of Intellectual Property Rights <input type="checkbox"/></li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>○ International Agreements and institutions on IPR <input type="checkbox"/></li> <li>○ IPR Regime in India <input type="checkbox"/></li> <li>○ National Intellectual Property Rights Policy <input type="checkbox"/></li> </ul> |
|---|--|

## INSTITUTIONS & POLICY

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>▣ <b>Institutions &amp; Policy</b> <ul style="list-style-type: none"> <li>○ India's policy in the field of the science and technology <input type="checkbox"/></li> <li>○ Various policies for S&amp;T <input type="checkbox"/></li> <li>○ Institutional structure <input type="checkbox"/></li> <li>○ Department of Science &amp; Technology <input type="checkbox"/></li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>○ CSIR <input type="checkbox"/></li> <li>○ Science and Engineering Research Board <input type="checkbox"/></li> <li>○ Technology Development Board <input type="checkbox"/></li> <li>○ National Accreditation Board For Testing And Calibration Laboratories <input type="checkbox"/></li> </ul> |
|--|---|

- |  |                          |  |  |                          |
|--|--------------------------|--|--|--------------------------|
| ○ Science and technology as a source of Human Resource Development | <input type="checkbox"/> |  | ○ India and global collaboration in science projects | <input type="checkbox"/> |
| ○ Awards related to Science  | <input type="checkbox"/> |  | ○ Technology Vision Document 2035                    | <input type="checkbox"/> |

## CONTEMPORARY ISSUES

- |   |                          |  |   |                          |
|---|--------------------------|--|---|--------------------------|
| ○ Electric vehicle  | <input type="checkbox"/> |  | ○ Synthetic Biology   | <input type="checkbox"/> |
| ○ Artificial intelligence   | <input type="checkbox"/> |  | ○ Artificial Intelligence and its Climate Cost                                | <input type="checkbox"/> |
| ○ Net neutrality  | <input type="checkbox"/> |  | ○ 'Tobacco behind more than a quarter of India's cancer cases'                | <input type="checkbox"/> |
| ○ Importance of own Navigation System                               | <input type="checkbox"/> |  | ○ Herd Immunity   | <input type="checkbox"/> |
| ○ Big Data Initiative   | <input type="checkbox"/> |  | ○ 'H9N2'  | <input type="checkbox"/> |
| ○ Nuclear Technology: Pros and Cons                                 | <input type="checkbox"/> |  | ○ 'India's population is expected to be more feminine in 2036'                | <input type="checkbox"/> |
| ○ Computer Games addiction and dangers                              | <input type="checkbox"/> |  | ○ The contact tracing technology  | <input type="checkbox"/> |
| ○ A Web 3.0 revolution that could relieve us of our social dilemmas | <input type="checkbox"/> |  | ○ 'Desalination Plants'   | <input type="checkbox"/> |
| ○ Surveillance reform: The need of Hour                             | <input type="checkbox"/> |  | ○ Discovery of Li-rich giant stars  | <input type="checkbox"/> |
| ○ '5G countdown'  | <input type="checkbox"/> |  | ○ First-ever digital geological map of moon                                   | <input type="checkbox"/> |
| ○ Deep Fakes  | <input type="checkbox"/> |  | ○ NASA's Artemis mission, and the Indian American in its new astronaut cohort | <input type="checkbox"/> |
| ○ Pulse oximetry and importance of oxygen                           | <input type="checkbox"/> |  | ○ 'Polycrack Technology'  | <input type="checkbox"/> |
| ○ Geopolitics of outer space  | <input type="checkbox"/> |  | ○ Huntingtin Disease  | <input type="checkbox"/> |
| ○ Launch of ISpA  | <input type="checkbox"/> |  | ○ 'Abhyas High-speed Expendable Aerial Target (HEAT)'                         | <input type="checkbox"/> |
| ○ PM releases First non-GM Herbicide-Tolerant Rice Varieties        | <input type="checkbox"/> |  | ○ 'Supersonic Missile Assisted Release of Torpedo (SMART) system'             | <input type="checkbox"/> |
| ○ National Policy for Rare Diseases (NPRD) 2021                     | <input type="checkbox"/> |  | ○ NASA's Spitzer Space Telescope  | <input type="checkbox"/> |
| ○ Liberalisation of the geospatial sector in India                  | <input type="checkbox"/> |  | ○ Mars Insight Mission  | <input type="checkbox"/> |
| ○ e-Technology to the aid of farmer                                 | <input type="checkbox"/> |  | ○ "Voyager 2"   | <input type="checkbox"/> |
| ○ ISRO to handle projects of national security                      | <input type="checkbox"/> |  | ○ 'Omega Centauri globular cluster'   | <input type="checkbox"/> |
| ○ India to Launch Deep Sea Mission                                  | <input type="checkbox"/> |  | ○ NEON: The Virtual Human   | <input type="checkbox"/> |
| ○ Brain fingerprinting technology                                   | <input type="checkbox"/> |  | ○ "Genome India Project"  | <input type="checkbox"/> |
| ○ DNA Technology (Use and Application) Regulation Bill, 2019        | <input type="checkbox"/> |  | ○ "GISAT-1 mission"   | <input type="checkbox"/> |
| ○ Space Security  | <input type="checkbox"/> |  | ○ 'Ariel Space Mission'   | <input type="checkbox"/> |
| ○ Sending Humans to Mars  | <input type="checkbox"/> |  | ○ National Space Promotion and Authorization Centre (IN-SPACe)                | <input type="checkbox"/> |

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# ECOLOGY & ENVIRONMENT

## 1. Ecology

- Types of 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

## 2. Ecosystem and its dynamics

- Ecosystem Definitions
- Functions and Properties of Ecosystem
- The Structure/Components of Ecosystem 
  - ▶ Abiotic Components
  - ▶ Biotic Components
- 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

## 3. Biogeochemical Cycles

- Parts of a Bio Geochemical Cycle
- Types of Biogeochemical Cycle 
  - ▶ Carbon Cycle
  - ▶ Nitrogen Cycle
  - ▶ Phosphorus Cycle
  - ▶ Sulphur Cycle

## 4. Biomes: Forest, Grassland, Mountain, and Desert Ecosystems

- Biome
- Grasslands
- Tundra
- Deserts
- Thar desert
- Mountain biome

## 5. Aquatic Life Zones: Ocean, Rivers, Lakes, and Wetlands

- Aquatic ecosystems
- Basic facts about the ocean
- Importance of the ocean
- Zones of the ocean 
  - ▶ Marine life
- Coral reefs

- Coral reefs in India
- Conserving coral reefs
- Mangroves
- Mangroves in India
- 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

**6. Biodiversity Basics**

- Biodiversity
- Important kinds of biodiversity
- Degree of diversity in an ecosystem 
  - ▶ Endemic species
- Keystone species
- Indicator species
- Invasive species
- Allopatric and sympatric speciation
- Bioinformatics 
  - ▶ Biodiversity distribution
- Megadivers Countries
- Uses and values of biodiversity
- State of global biodiversity
- Threats to biodiversity
- Biodiversity Hotspots
- Eco-regions
- Role of traditional knowledge in biodiversity
- Biopiracy
- Extinction of species
- Mass extinction
- IUCN's classification scheme
- IUCN Red-List of Threatened Species
- Level of biodiversity in India
- Biogeographi classification of India

**7. Biodiversity Conservation**

- Ex-situ aid in-situ conservation

- Seed banks
- Zoos in biodiversity conservation
- Botanical gardens
- Protected areas
- State of protected areas in the world
- 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

**8. 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

**9. 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

### 10. 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

### 11. 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

### 12. Waste Management

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

### 13. 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

### 14. 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

### 15. Solid Waste Management

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

**16. 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

**17. Recent developments**

- Air Pollution
- Report on Air Pollution
- Bharat Stage Emission Standards
- Polluters Pay Model
- Household Air Pollution
- Open Waste Burning and its Impact
- Graded Response Action Plan on Pollution
- UN Sets Limits on Global Airline Emissions
- Waste Management
- Biodegradable Plastics
- Green Train Corridors
- Oil Spill
- Solid Waste Management-Buffer Zone
- Other News
- Report of Parliamentary Committee on Forest Fires
- Urban Forestry Scheme
- Draft Notification to Regulate Pet Shops
- Ban on Import of Animal Skin
- River linking Project and Impact on Environment
- Algal Bloom Issue
- Illegal Salt Mining and its Impact

- India's Wetland Report, 2016
- Deep Sea Mining
- Mass Coral Bleaching
- Ganga River Pollution

**18. Environmental Impact Assessment**

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

**19. 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

**20. Environment related Institutions and Organizations**

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

**21. Schemes**

- Ecomark Scheme
- National Afforestation Program
- National River Conservation Plan
- National Mission for Clean Ganga
- National Air Quality Index (AQI)
- National
- Action
- Programme to Combat Desertification
- UJALA Scheme
- Bharat Stage Norms

## 22. International Environmental Governance

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

## 23. Basics of Climate change

- Green House Effect and Global Warming
- Global Climate Change: International Efforts to Control Global Warming or Global Climate Change
- Ozone Layer Depletion or Ozone Hole
- Acid Rain
- El Nino
- La Nina

## 24. 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

## 25. 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

## 26. Global Warming & Health

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

# CONTEMPORARY ISSUES

- Demand of Organic Farming showing upward trend'
- 'The concept of Precision farming in India'
- Canada's Milne ice shelf collapsed'
- 'Arctic Ice fails to refreeze by late October, setting a new record'
- A quarter of Bangladesh has been inundated with floodwaters: NASA
- 'Net zero by 2060: China's bold new carbon emissions goal'
- 'Conservation of the world's seagrasses'
- 'Aldabra's coral reefs recovered faster from bleaching, finds new research'
- Locust attack in India
- Conserving the Western Ghats
- Delhi gets its first smog tower: What is it and how does it work?

- 'Kamdhenu Deepawali Abhiyan'
- "Sukhna Lake becomes a 'living entity'"
- World to suffer \$10 trillion loss by 2050: WWF
- 'Kerala to curb alien plants' growth in NBR'
- Puntius sanctus
- Ecological disaster at Baghjan
- 'Link between climate change and wildfires'
- Black carbon deposits on Himalayan glaciers
- Massive plastic pollution footprint
- Trimeresurus Salazar
- 'Komodo dragons could become extinct soon due to climate change'
- 'Highest number of wetland species in Kaziranga'

- Mud packs and other remedies to save the Taj from pollution, age and insects
- Air Pollution
- Carbon Tax and Feasibility in India
- Demand for Renewable Energy
- India's Waste Management Crisis
- Polluters Pay Principle
- Public Participation in Environment Management
- E-Waste: Treasure or Threat?
- Why is it difficult for India to get to net zero?

- World Freed from Toxic Lead: UNEP
- Wildfires: Good servant bad disaster
- Human-Wildlife Conflict
- Plastic waste management rules on beating Plastic Pollution
- Circular Bioeconomy
- Harnessing the Power of India's Forests for Climate Change Mitigation
- Carbon Capture, Utilisation & Storage (CCUS)
- Ancient Bawadis and Water Management
- Interconnected Disasters Risk

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# INTERNAL SECURITY

## 1. Internal Security Challenges

- Internal Security Challenges
- Social Diversity as Issues of Security Threat
- Challenges from within
- Neighbours as Issue of Security Threat
- Non-State Actors as Issue of Security Threat
- Global Indices and Measurement of Vulnerability of a State Towards such Non-State Actors
- Law and Order vs. Internal Security

## 2. Terrorism Threat to India

- Terrorism Threat to India
- Changing face of Terrorism
- Terror Threats Faced by India
- Broader Framework to Deal with Terrorism
- Drawbacks in Intelligence Infrastructure

## 3. Organized Crime

- Types of Organized Crime
- Problems in controlling organized crimes
- Drug trafficking in India
- Combating organized crimes
- Linkage of Terrorism and Organized Crime in India

## 4. Linkage between Development and Spread of Extremism

- Stated Purpose of the Naxal Movement
- Covid 19 and Naxalism
- Why naxalism got huge support from common man?
- Why naxalism is biggest threat to internal security?

## 5. Insurgency in North-East

- Issues & Conflicts
- Assam Insurgency
- Resolving the Bodo Issue

## 6. Security Challenges in Border Areas

- Challenges to Border Management
- Issues Faced in Border Management
- Community Participation for Border Management

## 7. Basics of Cyber Security

- Types of Cyber Crimes
- Impact and Steps needed
- Recent Incident: Ransomware
- India's Cyber Security Infrastructure
- The National Cyber Security Policy of India 2013

## 8. Cyber Warfare

- Factors Contributing/Aggravating Rise of Cyber Attack
- Recent Initiatives for Tackling Cyber Warfare

## 9. Social Media and Internal Security Threat

- Regulation of Social Media in India for Internal Security
- Challenges in Monitoring Social Media
- Steps Needed

## 10. Money Laundering

- Meaning of Money Laundering
- Harmful Effects of Money Laundering

- Steps taken by the Government

**11. Black Money in India**

- Parallel Economy in India
- What are the various measures taken by Government to curb Black Money?
- Impact of demonetisation on black money
- Criticisms

**12. Police Reforms in India**

- The Organisational Structure
- Duties and Responsibilities of the Police
- Centre’s Role in Policing
- Traditional Security Challenges

- Non-Traditional Security Challenges (NTS)
- Recommendations for Police Reforms
- Police we Want in 21st Century

**13. Various Security Forces and their Mandate**

- Assam Rifles
- Border Security Force (BSF)
- Indo-Tibetan Border Police
- Central Industrial Security Force (CISF)
- Central Reserve Police Force
- National Security Guard
- integrated theatre commands
- National Maritime Security Coordinator
- Issues with Paramilitary Forces

**CONTEMPORARY ISSUES**

- Rise of Taliban is internal security challenge for India
- Non-lapsable Modernisation Fund for Defence and Internal Security (MFDIS)
- Drug trafficking in India
- Covid 19 and Naxalism
- Draft Drone Rules, 2021 released by Ministry of Civil Aviation
- Drone terror attack on Jammu base: dangerous new turning point
- Proposed model of the integrated

- theatre commands
- National Maritime Security Coordinator appointment
- Assessing India’s Cyber Security Infrastructure
- Surveillance reform: The need of Hour
- Need to Understand Cyber Threats before fighting them
- Data protection and Aadhaar security
- Debate on Cyber Security in India
- Issues related to Border Management

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# ETHICS INTEGRITY & APTITUDE

## 1. Ethics Basic Introduction

- Dimensions of Ethics
- Essence of Ethics
- Approaches of Ethical Study as Indian Perspective and Western Perspective
- Basic concept of ethics morality and value
- Ethics in public life
- Ethics in Economic Life
- Freedom and Discipline
- Duties and Rights
- Virtue Ethics
- Consequences of Ethics in Human Actions
- Values and Ethics in Government: Legislature, Executive and judiciary
- Contribution of Family in Value Education
- Contribution of Society in Inculcating Values
- Role of Educational Institutions in Inculcating Values

## 2. Human Values

- Human value & Socialization
- Individual Personality and Value
- Values and Skill
- Fundamental and Instrumental Values
- Democratic values
- Role of ethical value in governance and society
- Significance of value in civil services
- Aesthetic values
- Values in work life and professional ethics

## 3. Aptitude and foundational values of civil services

- Essential Aptitude for civil servants
- Foundational Values of Civil Services
- Neutrality
- Anonymity
- Civil Services Accountability
- Integrity
- Humility
- Adaptability
- Magnanimity
- Perseverance
- Impartiality and Non-Partisanship
- Tolerance and compassion for the weaker section
- Contribution to society

## 4. India & World Thinkers

- Indian Thinkers 
  - ▶ Mahatama Gandhi
  - ▶ Dr. S. Radhakrishnan
  - ▶ Rabindranath Tagore
  - ▶ Swami Dayanand Saraswati
  - ▶ Mahadeva Govinda Ranade
  - ▶ Sri Aurobindo
  - ▶ Swami Vivekananda
  - ▶ Sardar Patel
  - ▶ Buddha Bhim Rao Ambedkar
  - ▶ Raja Ram Mohan Roy
  - ▶ Chhatrapati Shahu Maharaj
  - ▶ Mother Teresa
  - ▶ Amitabha Chowdhury
  - ▶ Aruna Roy
  - ▶ T. N. Seshan
  - ▶ E. Sreedharan

- Administrative Thinkers
- ▶ Max Weber
- ▶ Elton Mayo
- ▶ Peter Drucker
- ▶ Chester Barnard
- ▶ Mary Parker Follet
- World Thinkers
- ▶ Plato
- ▶ Aristotle
- ▶ Socrates
- ▶ Jeremy Bentham
- ▶ JS Mill
- ▶ Thomas Hobbes
- ▶ John Locke
- ▶ Jean Jacques Rousseau
- ▶ John Rawls
- ▶ Immanuel Kant
- ▶ Carol Gilligan
- ▶ Jean Paul Sartre
- ▶ Georg Wilhelm Friedrich Hegel
- ▶ Confucius
- ▶ René Descartes
- ▶ Karl Marx
- ▶ Adam Smith
- ▶ Thomas Aquinas
- ▶ David Hume
- ▶ Democritus
- ▶ Galileo
- ▶ Friedrich Nietzsche
- ▶ Montesquieu
- ▶ Voltaire
- ▶ Thomas Jefferson

### 5. Indian & World Leaders

- Benjamin Franklin
- Martin Luther King
- Dalai Lama
- Nelson Mandela
- Mahatma Gandhi
- Siddhartha Gautama
- Aung San Suu Kyi
- Swami Vivekanand
- Albert Einstein
- Abraham Lincoln
- Mother Teresa
- J L Nehru

- Lee Kuan Yew
- Henry Ford
- Abdul Kalam
- Muhammad Yunus
- Wangari Maathai
- Kofi Annan
- Lech Walesa
- Desmond Tutu
- Isaac Newton
- Elie Wiesel
- King Ashoka
- Sun Yat Sen

### 6. Attitude

- Components of Attitude
- Affective component
- Cognitive component
- Behavioral component
- Functions of Attitude
- Adjustive Function
- Ego-Defensive Function
- Value-Expressive Function
- Knowledge Function
- Attitude Formation Model
- Impact of Beliefs and Values
- Group Influences
- Social Influence
- Persuasion Tactics
- Tools of Persuasion
- Moral Attitude formation
- Political Attitude formation

### 7. Emotional Intelligence

- Theories Associated with Emotional Intelligence
- Can Emotional Intelligence be Developed?
- Components of Emotional Competencies
- The Self-Awareness Cluster: Understanding Feelings and Accurate Self-Assessment
- The Self-Management Cluster: Managing Internal States, Impulses, and Resources
- The Social Awareness Cluster: Reading People and Groups Accurately
- The Relationship Management Cluster: Inducing Desirable Responses in Others



- Importance of Emotional Intelligence at Workplace
- Importance of Emotional Intelligence in Civil Services

### 8. Values & Ethics in Public Administration

- Ethical Concerns in Public Institution
- Ethical Concerns in Private Institutions
- Ethical Dilemmas in Public and Private Institutions
- Laws, Rules and Regulations as Source of Ethical Guidance
- Accountability and Ethical Governance Strengthening of Ethical and Moral Values in Governance
- Moral Judgments in International Relations
- Ethical Relation in Funding
- International Relations and concept of Moral Responsibility
- Ethics in working of international organizations
- What is Corporate Governance?
- Models of Corporate Social Responsibility
- Steps taken by World Bank for Good Corporate Governance
- Norms for Corporate Government in India
- Concept of business ethics

### 9. Probity in Governance

- Concept of Public Service
- Philosophical basis of Governance and Probity
- Information Sharing, Transparency and Right to Information
- Flaws in RTI and recommendations for improvement
- Importance of vigilant citizens
- Information sharing and participation
- Importance of Code of ethics
- Code of Ethics in Professions
- Code of Conduct for Ministers; for Legislators; for Civil Servants; for Regulators and for the Judiciary
- Components of a Citizen Charter
- Steps in formulation of a Citizen's Charter
- Concept of Work Culture

- The Indian Approach to Work
- Methods of improving Work Culture
- Quality of Service Delivery
- Utilisation of Public Funds
- Problems in Fund Release and Utilization
- Parliamentary Control on Expenditure
- Corruption in India: extent, dimension, and response
- Corruption as a social evil
- Probity in public life Corrupt practice among civil servants and official misconduct
- Exposing corruption: Civil Society initiatives and role of Whistleblower Act
- Tackling corruption: Role of government and institutions of governance
- Controlling corruption: Various approaches and efficacy

### 10. Applied Ethics

- Euthanasia Issue 
  - ▶ Social and ethical angle
  - ▶ Different arguments related to Euthanasia
  - ▶ Conclusion
- Surrogacy 
  - ▶ Case study
  - ▶ Issues
  - ▶ Ethical Issues
  - ▶ Concept of ethical surrogacy
  - ▶ Conclusion
- Ethics & Sports 
  - ▶ Importance of sports
  - ▶ Ethical Issue: Need for sportsmanship
  - ▶ Ethical Issue: Doping
  - ▶ Ethical Issue: Discrimination and Sexual Harassment
  - ▶ Ethical Issue: Sports as a Business
  - ▶ Steps needed
- Media Ethics 
  - ▶ Role of Media
  - ▶ Ethical Issues faced by Reporters
  - ▶ Trial by Media
  - ▶ Media Prejudice
  - ▶ Ethical Dilemma faced by Photo Journalists
  - ▶ Digital Media Ethics
  - ▶ Paid News

- Business Ethics 
  - ▶ Principles of Business Ethics
  - ▶ Dimensions related to Business Ethics in Organisation
  - ▶ Business Ethics and Corporate Governance
  - ▶ Journey from Philanthropy to Corporate Social Responsibility
  - ▶ Issues related to Corporate Social Responsibility
  - ▶ Issues in implementation of Business Ethics
- Ethics Related to Economic Sanctions 
  - ◆ Why Economic Sanctions placed?
  - ◆ Ethics in Economic Sanctions
  - ◆ Conclusion
- Refugees & Ethics 
  - ◆ Why Migration occurs?
  - ◆ Case study of Syria
  - ◆ Dilemmas related to Refugee crisis
  - ◆ Steps needed
- Ethical Dilemmas of Globalization 
  - ▶ What is Globalisation
  - ▶ Free trade in Globalised world
  - ▶ Issues with Newly developed trade patterns
  - ▶ Criticism against global regime
  - ▶ Way forward
- Ethics of War 
  - ▶ Ethics and War theories
  - ▶ Evils of war
- Environmental Ethics 
  - ▶ Linkage between Ethics and Environment
  - ▶ Theories related to Environmental ethics
  - ▶ Role of individual
- Ethical Issues in Biotechnology 
  - ▶ Issues related to Stem Cell
  - ▶ Issues related to cloning
  - ▶ Issues related to designer babies
- Animal Ethics 
  - ▶ Introduction
  - ▶ Issues of conducting research on animals
- ▶ Issue of keeping animals as pets
- ▶ Issue of Cruelty against animals
- ▶ Conclusion
- Food Adulteration and Ethics 
  - ▶ Ethical dimension
  - ▶ Ethical issue related to food additive
- Abortion: Ethical or Unethical 
  - ▶ Law of abortion in India
  - ▶ Recent Supreme Court verdict
  - ▶ Ethical Issue: Health of Women vs. fetus
  - ▶ Justification for abortion
  - ▶ Argument against abortion
  - ▶ Abortion and women rights
  - ▶ Abortion and father rights
- Honour Killing 
  - ▶ Honour killing is unethical
  - ▶ Role of khap pachayat
- Marital Rape 
  - ▶ Why Marital Rape should not be criminalized?
  - ▶ Why Marital Rape should be criminalized?
  - ▶ What are the hurdles?
- Ethical Issue Involved in Child Labour 
  - ▶ Rights of children
  - ▶ Child labour and company
  - ▶ Solution
  - ▶ Role of consumer
- Ethical Issue Involved in Treating Juvenile as Adult 
  - ▶ Juvenile justice system
  - ▶ Negative implications
- Ethics and Old Age 
  - ▶ Ethical issues
  - ▶ Issues faced
  - ▶ Importance of autonomy
- Ethics in Public and Private Relationships 
  - ▶ Ethical values in Private relationships
  - ▶ Ethical principles in Public relationships
  - ▶ Linkage between Private relationships and Public relationships

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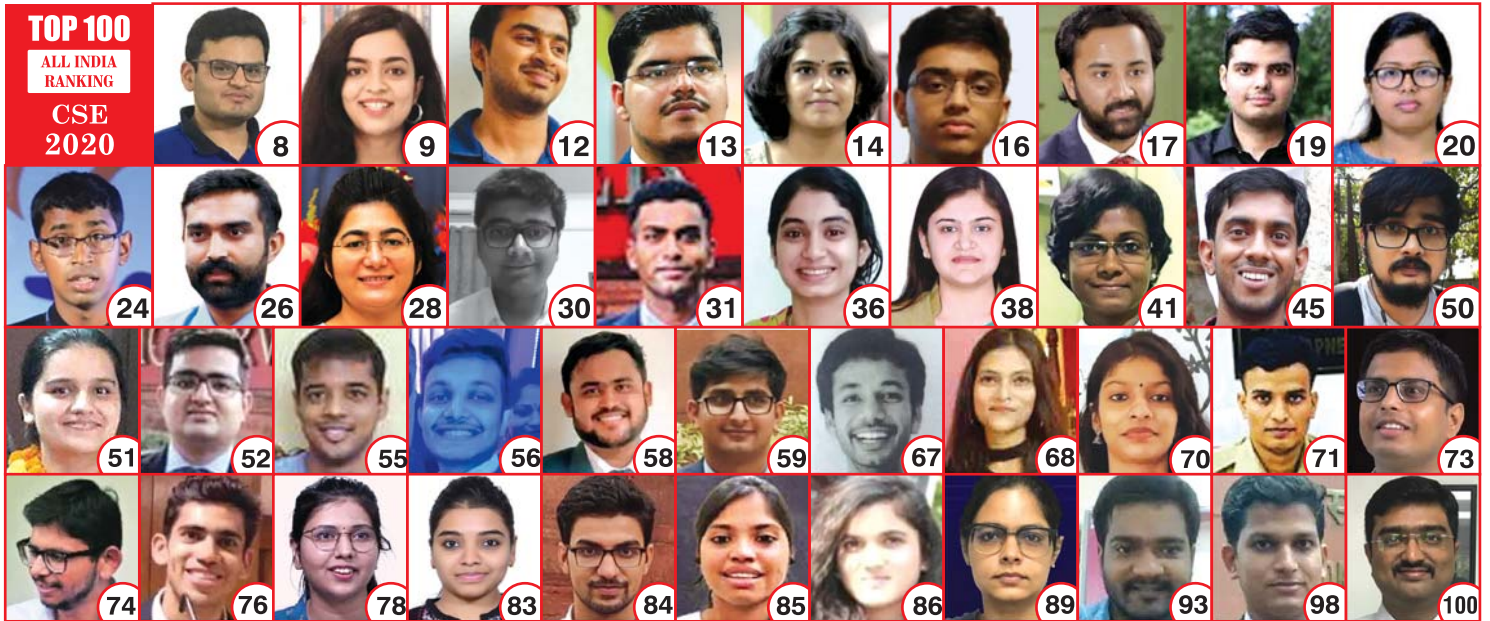
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