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- ▶ Teachings of Mahavira ☐
- ▶ Organisation and Sects of Jainism ☐
- ▶ Literature of Jainism ☐
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6. Buddhism

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- ▶ Teachings of Buddha ☐
- ▶ Organisation and Sects of Buddhism ☐
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- ▶ Rulers and Political History of the Mauryas ☐
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- ▶ Asoka's Inscriptions and Sites ☐
- ▶ Asokan Reign ☐
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- ▶ The Palas (8th to 11th Century) ☐
- ▶ The Tripartite Conflict ☐
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- Struggle between Ibrahim Lodi and Babur ☐
- The Battle of Panipat ☐
- Babur's problems after the Battle of Panipat ☐
- Struggle with RanaSanga ☐
- Problems of the Eastern Areas and the Afghans ☐
- Babur's Contribution and Significance of his Advent into India ☐
- Humayun and the Afghans ☐
- Early Activities of Humayun, and the Tussle with Bahadur Shah ☐
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6. The Establishment of the North Indian Empire

- Social and Political Background of Bihar and the Rise of Sher Shah to Power ☐
- The Sur Empire (1540-56) ☐
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7. Consolidation and Expansion of the Empire - Akbar

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 - 2nd Battle of Panipat ☐
- 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 ☐

8. 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 ☐

9. 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 ☐
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- Policies and religious toleration ☐

10. The Deccan and the Mughals (Up to 1657)

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- Mughal Advance towards the Deccan ☐
- Mughal Conquest of Berar, Khandesh and Parts of Ahmadnagar ☐
- Rise of Malik Ambar ☐
- Mughal Attempt at Consolidation (1601-27) ☐
- Extinction of Ahmadnagar, Acceptance of Mughal ☐
- Suzerainty by Bijapur and Golconda ☐
- Shah Jahan and the Deccan (1636-57) ☐
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- The Question of Qandahar and Relations with Iran ☐
- Shah Jahan's Balkh Campaign ☐
- Mughal - Persian Relations - the Last Phase ☐

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- Territorial Consolidation and Expansion of the Empire - Mewar, East India and Kangra ☐
- NurJahan, and the NurJahan '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 ☐

13. 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 ☐
- Aurangzeb and the Deccani States (1658-87) ☐
- Marathas and the Deccan (1687-1707) ☐
- Assessment of Aurangzeb and the Jagirdari Crisis ☐

14. The Maratha and Other Indian States and Society in The 18th Century

- 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: ☐
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- Shivaji (1627-1680) ☐
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15. Vijayanagar Empire

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- ▶ Social and Cultural Conditions ☐
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- ▶ 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) ☐

18. Society-Structure and Growth

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19. Economic Life-Patterns and Prospects

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- ▶ 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 ☐

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- ▶ The Portuguese in India ☐
- ▶ De Almeida ☐
- ▶ Albuquerque ☐
- ▶ Causes of failure of Portuguese empire in India ☐
- ▶ The Dutch in India ☐
- ▶ The Danes in India ☐
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- ▶ Anglo-French Rivalry ☐
- ▶ First Carnatic War ☐
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- ▶ The Subsidiary Alliance System ☐
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- ▶ The Conquest of Sindh ☐
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- ▶ Annexation of Oudh ☐

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- ▶ The Charter Acts ☐
- ▶ Judicial System ☐
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4. Economic Policies of The British

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- ▶ Phase of Free Trade (1813-1858) ☐
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- ▶ Nationalist Critique of Colonial Economy ☐
- ▶ Abolition of the Dual System ☐

6. The Revolt Of 1857

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- ▶ Nature and Impact of the Revolt ☐
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7. Administrative Changes After 1857

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- ▶ Changes in the Army ☐

- ▶ Public Services ☐
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- ▶ Aitchison Committee on Public Services (1886) ☐
- ▶ Montford Reforms (1919) ☐
- ▶ Lee Commission (1924) ☐
- ▶ Government of India Act, 1935 ☐

9. Development of Education

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- ▶ Orientalist-Anglicism Controversy ☐
- ▶ Efforts of Thomson ☐
- ▶ Wood's Dispatch (1854) Hunter Education Commission (1882-83) ☐
- ▶ Indian Universities Act, 1904 ☐
- ▶ Government Resolution on Education Policy—1913 ☐
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- ▶ Education Under Dyarchy ☐
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- Sikh Reform Movement ☐
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12. Personalities

- Raja Ram Mohan Roy ☐
- Swami Vivekananda ☐
- Swami Dayananda Saraswati ☐
- Ishwar Chandra Vidyasagar ☐
- Keshab Chandra Sen ☐
- Sri Ramakrishna Paramhansa ☐
- Mahadev Govind Ranade ☐
- Annie Besant–Theosophical Society ☐
- Syed Ahmad Khan ☐
- Baba Dayal Das ☐
- Pandita Ramabai Sarojini Naidu ☐
- Jyotiba Phule ☐
- Dr. Bhimrao Ramji Ambedkar ☐

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- Peasant Movements ☐
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 - Kheda Peasant Struggle ☐
 - Bardoli Movement ☐
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14. Revolutionary Nationalism

- Early Phase Indian National Congress ☐
- The Moderate Congress (1885-1905) ☐
- Opinion Against Economic Exploitation ☐
 - Administrative Reforms Constitutional Reforms : Weaknesses & Evaluation
- The Extremist (1905-1920) ☐
 - Terrorist Movements ☐
 - The Revolutionary Movement ☐
 - Reasons for Failure ☐
 - Revolutionary Activities in Maharashtra ☐
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 - Revival of Revolutionary Nationalism ☐
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 - The Indian Independence Committee in Berlin ☐
- Differences between the Moderates and the Extremists ☐

15. Indian National Movement – I (1905-1918)

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- Swadeshi Movement ☐
- Muslim League, 1906 ☐
- Surat Session of INC, 1907 ☐
- Indian Council Act (Morley-Minto Act) 1909 ☐
- Ghadar Party, 1913 ☐
- Komagata Maru Incident 1914 ☐
- The Lucknow Pact (1916) ☐
- Home Rule Movement (1915-1916) ☐
- August Declaration, 1917 ☐

16. Indian National Movement –II (1918-1929)

- World War I-Reforms and Agitation ☐
- Champaran Satyagraha (1917) ☐
- Ahmadabad Mill Strike (1918) ☐
- Kheda Satyagraha (1918) ☐
- The Government of India Act, 1919 ☐
- Rowlatt Act and Jallianwala Bagh Massacre (1919) ☐
- Khilafat Movement ☐

- The Non-Cooperation Movement (1920-22) ☐
- Bardoli Resolution ☐
- Nagpur Session of Congress ☐
- Swaraj Party and its Evaluation ☐
- Muddiman Committee (1924) ☐
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- Jinnah's Fourteen Points ☐
- Lahore Session, 1929 ☐
- Allahabad Address (1930) ☐

17. Indian National Movement - III (1930-1947)

- Civil Disobedience Movement (1930-1931) ☐
- First Round Table Conference, 1930 ☐
- Gandhi-Irwin Pact, 1931 ☐
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- Second Round Table Conference, 1931 ☐
- Civil Disobedience Movement (Second-Phase) ☐
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- Government of India Act, 1935 ☐
- World War II and Indian Nationalism ☐
- Resignation of Congress Ministers (1939) ☐
- Poona Resolution and Conditional Support to Britain (1941) ☐
- August Offer of 1940 ☐
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- Cripps Mission (1942) ☐
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- I.N.A. Trials ☐
- R.I.N. Rebellion ☐
- Rajagopalachari Formula, 1945 ☐
- Desai - Liaqat Pact ☐
- Cabinet Mission (1946) ☐
- Wavell Plan ☐

- Jinnah's Direct Action Resolution ☐
- Mountbatten Plan of June 1947 ☐
- Indian Independence Act 1947 ☐

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- Governor Generals of Bengal (1773-1833) ☐
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- Viceroy and Governor Generals of India (1858-1947) ☐

List

- Robert Clive (1754-1767) ☐
- Lord Warren Hastings (1773-1785) ☐
- Lord Cornwallis (1786-1793) ☐
- Sir John Shore (1793-1798) ☐
- Lord Arthur Wellesley (1798-1805) ☐
- Lord George Barlow (1805-1807) ☐
- Lord Minto-I (1807-1813) ☐
- Francis Rawdon Hastings (1813-1823): (Marques of Hastings) ☐
- Lord Amherst (1823-28) ☐
- Lord William Bentinck (1828-1835) ☐
- Sir Charles Metcalfe (1835-1836) ☐
- Lord Auckland (1836-1842) ☐
- Lord Ellenborough (1842-1844) ☐
- Lord Hardinge-I (1844-1848) ☐
- Lord Dalhousie (1848-1856 great imperialist and colonist) ☐
- Lord Canning (1856-1857 and 1858-1862) ☐
- Lord Elgin-I (1862-1863) ☐
- Lord Lawrence (1864-1869) ☐
- Lord Mayo (1869-1872) ☐
- Lord Northbrook (1872-1876) ☐
- Lord Lytton (1876-1880) ☐
- Lord Rippon (1880-1884) ☐
- Lord Dufferin (1884-1888) ☐
- Lord Lansdowne (1888-1894) ☐
- Lord Elgin-II (1894-1899) ☐
- Lord Curzon (1899-1905) ☐
- Lord Minto-II (1905-1910) ☐
- Lord Hardinge-II (1910-1916) ☐
- Lord Chelmsford (1916-1921) ☐

- Lord Reading (1921-1926) ☐
- Lord Irwin (1926-1931) ☐
- Lord Willingdon (1931-1936) ☐
- Lord Linlithgow (1936-1944) ☐
- Lord Wavell (1944-1947) ☐
- Lord Mountbatten (1947-1948) ☐

19. Constitutional Development in India

- Regulating Act 1773 ☐
- Pitts India Act of 1784 ☐
- Charter Act of 1793 ☐

- Charter Act of 1813 ☐
- Charter Act of 1833 ☐
- Charter Act of 1853 ☐
- Government of India Act 1858 ☐
- The Indian Councils Act 1861 ☐
- Indian Councils Act 1892 ☐
- Indian Councils Act 1909 or Morley - Minto Reforms ☐
- Government of India Act 1919 or Montague - Chelmsford Reforms ☐
- Government of India Act 1935 ☐
- Indian Independence Act, 1947 ☐



Remarks

INDIAN CULTURE

VISUAL ARTS

1. Architecture

- ▶ 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 Temples ☐
- ▶ Chola Period Temples ☐
- ▶ Pandya Temples ☐
- ▶ Vijaynagar Period Temples ☐
- ▶ Nayaka Temples ☐
- ▶ Temples of Kerala ☐
- ▶ Rashtrakuta Period Temples ☐
- ▶ Schools of Temple Architecture ☐
 - Nagara Style ☐
 - Vesara Style ☐
 - Hoysala Style ☐
 - Dravidian Style ☐
- ▶ **Indo-Islamic Architecture** ☐
 - Imperial Style (Delhi Sultanate) ☐
 - Provincial Style ☐
 - Mughal Style ☐

- Sikh Style of Architecture ☐
- Avadh (Oudh) Style ☐
- Rajput Architecture ☐
- Jaina Art ☐
- ▶ **Modern Architecture** ☐
 - European Influence ☐
 - Portuguese ☐
 - Danish ☐
 - British ☐
 - Indo-Saracenic Architecture ☐
 - Post-Independence Period ☐

2. Sculptures

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

3. Paintings

- ▶ Cave 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 ☐

4. Pottery Tradition

- ▶ Ochre: Coloured Pottery(OCP) ☐

- ▶ Black and Red Ware (BRW) ☐
- ▶ Painted Grey Ware (PGW) ☐
- ▶ Northern Black Polished Ware (NBPW) ☐
- ▶ Glazed and Unglazed Pottery ☐

5. Numismatics

- ▶ Coinage ☐

PERFORMING ARTS

1. Music in India

- ▶ Classical Indian Music ☐
 - Hindustani Music ☐
 - Gharanas ☐
 - Carnatic Music ☐
- ▶ Main Pillars of Indian Music ☐
- ▶ Forms of Indian Music ☐
- ▶ Musical Instruments ☐
- ▶ Institutions Related to Music in India ☐
- ▶ Folk Music ☐

2. Dances in India

- ▶ Concept of Dance in India ☐
- ▶ Concept of Ashta Nayika ☐
- ▶ Rasa and Bhava ☐
- ▶ Eight Classical Dance Forms in India ☐
- ▶ Folk Dances ☐
- ▶ Modern Dances ☐

3. Sports in India

- ▶ Various Type of Sports ☐
- ▶ Genesis of Martial Arts ☐

- ▶ Forms of Traditional Martial Arts ☐
- ▶ Animal Sports ☐

4. Indian Theatre

- ▶ History of Theatre in India ☐
- ▶ Classical Sanskrit Theatre ☐
- ▶ Traditional Theatre ☐
- ▶ Regional Theatre ☐
- ▶ Modern Theatre in India ☐
- ▶ Renaissance of Indian Theatre ☐
- ▶ Cinema in India ☐
 - History of Indian Cinema ☐
 - Classification of Indian Cinema Film ☐

5. Indian Puppetry

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

RELIGION, LANGUAGE AND LITERATURE

1. Religions in-India

- ▶ Pre-Vedic Religion ☐
- ▶ Hinduism ☐
- ▶ Buddhism ☐
- ▶ Jainism ☐

- ▶ Sikhism ☐
- ▶ Islam ☐
- ▶ Christianity ☐
- ▶ Zoroastrianism ☐
- ▶ Judaism ☐

- Philosophy in India ☐
- Bhakti Movement ☐
- Saints of Bhakti Movement ☐
- Sufism ☐

2. Languages and Literature in India

- Classical Language ☐
- 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 Literature ☐
- Hindi Literature ☐
- Persian Literature ☐
- Urdu Literature ☐
- Influence/Contribution of foreign languages & Literature to India language ☐

MISCELLANEOUS

- Government Cultural Institutions in India ☐
- UNESCO's List of Cultural Heritage in India ☐
- Protection and Promotion of Indian Culture and Heritage :Legal Provisions ☐
- Schemes and Awards ☐
 - Awards and Honours Associated with Culture ☐
 - International Yoga Day ☐
 - Indian Handicrafts ☐
- Personalities Related to Culture ☐
- Places of Cultural Interest ☐
- The Calendar & the Eras ☐
- Science and Technology in Ancient India ☐

Recent developments

- Important Festivals ☐
- Kheer Bhawani festival ☐
- Mahapushkaram ☐
- Bathu kamma ☐
- Manipur Sangai Festival ☐
- Losar festival ☐
- Intangible Cultural Heritage under UNESCO has inscribed 'Kumbh Mela' ☐
- Sankalp Parva-Sankalp se Siddhi' ☐
- Paryatan Parv ☐

- Bharat Parv ☐
- Orange Festival Nagpur ☐
- Protest against Sunburn fest ☐
- 2017 Teesta Rangit Tourism Festival ☐
- Ganga sagarmela ☐
- Nabakalebar Rath Yatra ☐
- Chapchar Kut Festival ☐
- Hornbill Festival ☐
- Wangala Festival ☐
- Schemes for Cleanliness of Tourist Places ☐
- Swachh Bharat Swachh Smarak ☐
- 'Swachh Bharat Swachh Paryatan' ☐
- Incredible India 2.0 Campaign ☐
- Schemes for Development of Cultural Heritage ☐
- Sanskriti App ☐
- Cultural Mapping of India ☐
- Schemes for Monument Development ☐
- HRIDAY ☐
- SWADESH DARSHAN ☐
- PRASAD SCHEME ☐
- AdarshSmarak Yojana ☐
- Cultural Scheme Monitoring System ☐
- Schemes for promotion of Culture ☐
- Schemes for Serious Literature and Litterateurs ☐

- National Mission on Monuments and Antiquities ☐
- National Mission on Manuscripts ☐
- Gandhi Heritage Sites Mission ☐
- Muziris Heritage Site ☐
- International Initiatives for Cultural Development and Recognition ☐
- Project Mausam ☐
- International Buddhist Conclave ☐
- World's Heritage ☐
- UNESCO inscribes Yoga in the representative list of Intangible Cultural Heritage of Humanity ☐

- UNESCO Creative Cities Network ☐
- UNESCO Global Geopark ☐
- National Virtual Library of India ☐
- Jallikattu ☐
- Kambala ☐
- GI Tag ☐
 - Definition ☐
 - GI vs. Trademark ☐
 - Rights under GI ☐
 - Famous Goods ☐
 - Latest addition ☐
- Rashtriya Ekta Diwas ☐

 **Remarks**

GEOGRAPHY

GENERAL GEOGRAPHY

1. Universe

- ▶ Theories of development of Universe ☐
- ▶ Galaxy ☐
- ▶ Star formation ☐
- ▶ Planet formation ☐
- ▶ Solar system ☐
- ▶ Moon ☐
- ▶ Asteroid ☐
- ▶ Meteor ☐
- ▶ Kupier belt ☐
- ▶ Comets ☐
- ▶ Dwarf planets ☐

2. Earth Evolution

- ▶ Geological History of Earth ☐

- ▶ Evolution of the Earth Layered Structure ☐
 - Evolution of Lithosphere ☐
 - Evolution of Atmosphere ☐
 - Evolution of Hydrosphere ☐
- ▶ Latitude and Longitude including important Parallels and Meridians ☐
- ▶ Motions of the Earth - Rotation, Revolution and their effects ☐
- ▶ Inclination of the Earth's Axis and its effects ☐
- ▶ Time Zones, Local and Standard Time and the International Date Line, Calendar ☐
- ▶ Eclipses - Solar, Lunar ☐
- ▶ Earth's magnetic field ☐
- ▶ Earth's Geological time scale ☐
- ▶ ORIGIN of LIFE ☐

GEOMORPHOLOGY

1. Earth's Interior

- ▶ Interior of the Earth ☐
 - Crust ☐
 - Mantle ☐
 - Core ☐
- ▶ Sources of Information ☐
 - Direct ☐
 - Indirect - Earth Quake Waves Volcanoes ☐
- ▶ Theories – Sues Theory ☐

2. Geology and Rock system

- ▶ 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 ☐

3. Geomorphic Processes

- ▶ Earth's Surface ☐
 - Exogenic Forces ☐
 - Endogenic Forces ☐
 - Gradation , Degradation & Agradation ☐
- ▶ Endogenic Forces ☐
 - Diastrophism ☐
 - Orogenic ☐
 - Epierogenic ☐
 - Earthquakes ☐
 - Plate movements ☐
 - Volcanism ☐
- ▶ Exogenic Forces ☐
 - Denudation Processes ☐
 - Weathering ☐
 - Mass movements ☐
 - Erosion Transportation & Deposition ☐

4. Earthquakes and Volcanism

- ▶ Earthquakes ☐
 - Waves: P,S, Body, Surface, ☐
 - Shadow Zone ☐
 - Types of Earthquakes ☐
 - Effects ☐
 - Frequency ☐
 - Locating an Epicentre ☐
- ▶ Volcanism ☐
 - Types ☐
 - Shield ☐
 - Composite ☐
 - Caldera ☐
 - Flood Basalt ☐
 - Mid Ocean Ridge ☐
 - Landforms (intrusive) ☐
 - Batholiths ☐
 - Lacoliths ☐

- Lopoliths ☐
- Phacoliths ☐
- Sills ☐
- Dykes ☐

5. Distribution of Continents & Oceans

- ▶ Theories ☐
 - Continental Drift Theory ☐
 - Alfred Wegner ☐
 - Pangea, Panthalasa ☐
 - Laurasia, Gondwanaland ☐
 - Evidence in support of Continental Drift Theory ☐
 - Jigsaw Fit ☐
 - Rocks of Same age across oceans ☐
 - Tillite ☐
 - Placer Deposits ☐
 - Distribution of Fossils ☐
- ▶ Isostasy ☐
- ▶ Sea Floor Spreading ☐
- ▶ Forces of Drifting ☐
 - Pole Fleeing Force ☐
 - Tidal Force ☐
- ▶ Post Drift Studies ☐
 - Convectional Current Theory ☐
 - Mapping of the Ocean Floor ☐
- ▶ Plate Tectonics ☐
 - Lithospheric Plates - Major Plate - Minor Plates ☐
- ▶ Plate Boundaries – Divergent – Convergent – Transform ☐
- ▶ Rates of Plate Movements ☐
- ▶ Force of plate movement ☐
- ▶ Indian Plate ☐

6. Landforms and their evolution

- ▶ Causes ☐
 - Geomorphic Processes ☐
 - Geomorphic Agents ☐
- ▶ Geomorphic Agent ☐
 - Erosional or Destructional ☐
 - Depositional or Constructional ☐

► Agents and their Impacts - Wind, Running Water, Ground Water, Glaciers, Waves & Currents	<input type="checkbox"/>	■ Pools - Swallow Hole, Valley Sinks (Uvalas), Sinkholes, Collapse sinks (Dolines), Lapias, Ridges, Limestone Pavements	<input type="checkbox"/>
► Winds	<input type="checkbox"/>	■ Caves – Altering bed of Rocks (Shale sandstone quartzit, Caves and Tunnels)	<input type="checkbox"/>
◦ As agents in Hot deserts	<input type="checkbox"/>	◦ Depositional landforms	<input type="checkbox"/>
◦ Cause – Deflation Abrasion Impact	<input type="checkbox"/>	■ Stalactites	<input type="checkbox"/>
◦ Erosional landforms	<input type="checkbox"/>	■ Stalagmites	<input type="checkbox"/>
■ Pediments and Pediplains	<input type="checkbox"/>	■ Pillar Columns	<input type="checkbox"/>
■ Playas	<input type="checkbox"/>	► Glaciers	<input type="checkbox"/>
■ Deflation Hollows and Caves	<input type="checkbox"/>	◦ Erosional Landforms	<input type="checkbox"/>
■ Mushroom, Table & Pedestal Rocks	<input type="checkbox"/>	■ Cirque of Tarn Lakes	<input type="checkbox"/>
◦ Depositional Landforms	<input type="checkbox"/>	■ Hors and Serrated Regions – Arete	<input type="checkbox"/>
■ Barchans	<input type="checkbox"/>	■ Glacial Valleys / Troughs – Fiords	<input type="checkbox"/>
■ Seif	<input type="checkbox"/>	◦ Depositional Landforms	<input type="checkbox"/>
■ Parabolic	<input type="checkbox"/>	■ Glacial Tills	<input type="checkbox"/>
■ Transverse	<input type="checkbox"/>	■ Moraines	<input type="checkbox"/>
■ Longitudinal	<input type="checkbox"/>	■ Eskers	<input type="checkbox"/>
► Running Water	<input type="checkbox"/>	■ Outwash Planes	<input type="checkbox"/>
◦ Erosional Landforms	<input type="checkbox"/>	■ Drumlins	<input type="checkbox"/>
■ Valleys	<input type="checkbox"/>	► Waves and Currents	<input type="checkbox"/>
▢ Rills	<input type="checkbox"/>	◦ High Rocky Coasts & Low Sedimentary Coasts	<input type="checkbox"/>
▢ Gullies	<input type="checkbox"/>	◦ Erosional Landforms	<input type="checkbox"/>
▢ Valleys – V Shape, Gorge (Hard Rocks), Canyon (Sedimentary)	<input type="checkbox"/>	■ Cliffs	<input type="checkbox"/>
■ Potholes & Plunge pools	<input type="checkbox"/>	■ Terraces	<input type="checkbox"/>
■ Incised or entrenched meanders	<input type="checkbox"/>	■ Caves	<input type="checkbox"/>
■ River Terraces – paired & unpaired	<input type="checkbox"/>	■ Stacks	<input type="checkbox"/>
◦ Depositional Landforms	<input type="checkbox"/>	◦ Depositional Landforms	<input type="checkbox"/>
■ Alluvial Fans	<input type="checkbox"/>	■ Beaches and Dunes	<input type="checkbox"/>
■ Delta	<input type="checkbox"/>	■ Bars, Barriers, Spits	<input type="checkbox"/>
■ Flood plains, Natural Levees, Point Bars	<input type="checkbox"/>	Weathering	<input type="checkbox"/>
■ Meanders, Slip off bank, Under cut bank	<input type="checkbox"/>	► Factors	<input type="checkbox"/>
■ Oxbow lake	<input type="checkbox"/>	◦ Geological	<input type="checkbox"/>
■ Braided Channels	<input type="checkbox"/>	◦ Climatic	<input type="checkbox"/>
► Ground Water (Karst Topography)	<input type="checkbox"/>	◦ Topographic	<input type="checkbox"/>
◦ Permeable Rocks	<input type="checkbox"/>	◦ Vegetative	<input type="checkbox"/>
■ Percolation	<input type="checkbox"/>	► Major Processes	<input type="checkbox"/>
■ Bedding Plains	<input type="checkbox"/>	◦ Chemical	<input type="checkbox"/>
◦ Limestone and Dolomite Regions	<input type="checkbox"/>	◦ Physical or Mechanical	<input type="checkbox"/>
■ Balkans, Adjacent to Adriatic regions	<input type="checkbox"/>	◦ Biological	<input type="checkbox"/>
◦ Erosional Landforms	<input type="checkbox"/>	► Chemical – Forces Chemical Action	<input type="checkbox"/>

- Solution ☐
- Carbonation ☐
- Hydration ☐
- Oxidation & Reduction ☐
- ▶ Physical Forces Gravitational, Expansion, Water Pressure ☐
- Unloading & Expansion ☐
- Temperature changes and Expansion ☐
- Freezing, Thawing, & Frost Wedging ☐
- Salt Weathering ☐
- ▶ Biological Weathering ☐
- Burrowing ☐
- Wedging ☐
- Plant Roots ☐
- ▶ Effects of Weathering ☐
- Exfoliation (Flakin) – Exfoliation Domes ☐
- ▶ Significance of Weathering ☐
- Soil Formation ☐
- Biomes and Biodiversity ☐
- Leaching / Enrichment ☐
- ▶ Mass Movements ☐
- Activating causes ☐
- Forms of movement – Heave Flow Slide ☐

7. Landforms across the world

- ▶ Rivers and lakes (Factual) ☐
- ▶ Mountain and Peaks (Factual) ☐
- ▶ Plateaus (Factual) ☐

OCEANOGRAPHY

1. Hydrosphere

- ▶ Water on the Surface of the Earth ☐
- ▶ Hydrological Cycle ☐
- Component ☐
- Processes ☐

2. Submarine Relief Features

- ▶ Oceans ☐
- ▶ Relief of the Ocean floor ☐
- ▶ Divisions of the ocean floor ☐
- Continental Shelf ☐
- Continental Slope ☐
- Deep sea plain ☐
- Oceanic deep and Trenches ☐
- ▶ Minor relief features ☐
- Mid oceanic ridges ☐
- Seamount ☐
- Submarine canyons ☐
- Guyouts ☐
- Volcanic Islands ☐
- Fracture Zones ☐
- Hotspots ☐
- Coral Islands ☐
- Atoll ☐

3. Temperature and Salinity

- ▶ Temperature of the Ocean Water ☐
- Vertical ☐
- Spatial ☐
- Factors affecting Temperature distribution ☐
- ▣ Latitude ☐
- ▣ Unequal distribution of land & Water ☐
- ▣ Prevailing wind ☐
- ▣ Ocean Currents ☐
- Horizontal & Vertical Distribution ☐
- ▶ Salinity of the Ocean Water ☐
- Factors affecting salinity ☐
- ▣ Evaporation and precipitation ☐
- ▣ Fresh water flow from rivers ☐
- ▣ Ocean currents ☐
- Horizontal distribution of salinity ☐
- Vertical Distribution of salinity ☐
- ▶ Density of Ocean Waters ☐

4. Waves, Ocean Currents, Tides

- ▶ Movements of ocean Water ☐
- ▶ Factors influencing Movement ☐
- Temperature ☐
- Salinity ☐
- Density ☐

- Motion – Horizontal and Vertical Currents ☐
- Waves ☐
 - Motion of waves and water molecules ☐
 - Characteristics of wave ☐
 - Crest and Trough ☐
 - Height ☐
 - Amplitude ☐
 - Period ☐
 - Length ☐
 - Speed ☐
 - Frequency ☐
- Tides ☐
 - Relation between Gravitational Forces and Tides ☐
 - Tidal currents ☐
 - Types of Tides ☐
 - Based on Frequency – Semi Diurnal, Diurnal, mixed ☐
 - Based on SME position – spring and Neap Tides ☐
 - Importance of Tides ☐
- Ocean Currents ☐
 - Primary Force that initiates the movement ☐
 - Heating of solar energy ☐
 - Wind ☐
 - Gravity ☐
 - Coriolis force ☐
 - Secondary force that influence the currents to flow ☐

- Types of ocean currents: ☐
 - Surface currents & Deep water currents based on Depth ☐
 - Cold and Warm Currents based on Temperature ☐
- Major Ocean currents of the World ☐
- Effects of Ocean Currents ☐

5. Marine Resources

- Underground water resource ☐
- Surface water resources ☐
- Inland water resources: Utilization of inland water resources ☐
- Oceanic Water Resources (Marine Resource) ☐
- Utilization of oceans by man ☐
- Water consumption patterns ☐
- Conservation of Water Resources ☐
- Techniques of Water Conservation ☐

6. Ocean Deposits and Corals

- Terrigenous Deposits ☐
- Volcanic Deposits ☐
- Biotic deposits ☐
 - Neritic ☐
 - Pelagic (Calcereous , Siliceous) ☐
- Abiotic Deposits ☐
- Coral Reefs ☐
- Great Barrier Reef ☐

CLIMATOLOGY

1. Atmosphere

- Composition ☐
- Gases ☐
- Water Vapour ☐
- Dust Particles ☐
- Structure ☐
- Exosphere ☐
- Thermosphere ☐
- Mesosphere ☐

- Stratosphere ☐
- Troposphere ☐
- Altitude vs. Temperature ☐

2. Inversion of Temperature

- Temperature ☐
- Factors controlling Temp distribution ☐
- Distribution of Temp Month of January-July ☐
- Range of Temp Month of January-July ☐
- Inversion of Temperature ☐

3. Insolation and Heat Budget

- Solar Radiation Heat Balance Temperature ☐
- Insolation ☐
- Aphelion and Perihelion ☐
- Variability of Insolation at the surface of the Earth ☐
 - Day Season Year ☐
 - Rotation on Axis, Angle of Inclination of 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 ☐

4. Winds and Pressure belts

- Atmospheric Circulation and Weather Systems ☐
- Atmospheric Pressure ☐
- Vertical variation of pressure ☐
- Horizontal distribution of pressure ☐
- World Distribution of Sea Level Pressure ☐
- Factors affecting the velocity and direction of the Wind ☐
- Pressure Gradient Force ☐
- Frictional Force ☐
- Coriolis Force ☐
- Pressure and Wind (Cyclonic & Anticyclone Circulation) ☐
- General Circulation of the Atmosphere – Pattern of Planetary Winds ☐
- Latitudinal Variation of Atmospheric Heating ☐
- Emergence of Pressure Belts ☐
- Migration of Belts Following apparent Path of Sun ☐

- Distribution of continents & Oceans ☐
- Rotation of the Earth ☐
- Circulation ☐
- Simplified Global Circulation – Hadley Cell , Ferrel Cell ☐
- Seasonal Wind ☐
- Local Wind ☐
- Land and Sea Breezes ☐
- Mountain and Valley Winds ☐

5. Air Mass, Fronts, Cyclones and Jet Stream

- Air mass & fronts ☐
- Cyclones ☐
- Thunderstorms ☐
- Tornadoes ☐
- Monsoons ☐
- Fronts ☐

6. Precipitation

- Water in the Atmosphere ☐
- Water Vapour ☐
- Precipitation ☐
- Humidity – Absolute and Relative ☐
- Saturation – Dew Point ☐
- Evaporation and Condensation ☐
- Dew ☐
- Frost ☐
- Fog & Mist ☐
- Clouds ☐
 - Types – Cirrus, Cumulus, Stratus, Nimbus ☐
 - High – Cirrus, Cirrostratus, Cirrocumulus ☐
 - Middle – Altostratus, Altocumulus ☐
 - Low – Stratocumulus, Nimbostratus ☐
- Vertical Development – Cumulus and Cumulonimbus ☐
- Precipitation ☐
- Rainfall, Snowfall, Sleet Hail, Hailstones ☐
- Types of Rainfall ☐
 - Conventional ☐
 - Orographic ☐
 - Cyclonic ☐
- World Distribution of Rainfall ☐

7. Climatic Zones of the World

- Koppen's Classification Climatic Zones ☐
- World Climate ☐
- The Hot, Wet Equatorial Climate ☐
- The Tropical Monsoon and Tropical Marine Climates ☐
- The Savanna or Sudan Climate ☐
- The Hot Desert and Mid-Latitude Desert Climates ☐
- The Warm Temperate Western Margin (Mediterranean) Climate ☐

- The Temperate Continental (Steppe Climate) ☐
- The Warm Temperate Eastern Margin (China Type Climate) ☐
- The Cool Temperate Western Margin (British Type Climate) ☐
- The Cool Temperate Continental (Siberian) Climate ☐
- The Cool Temperate Eastern Margin (Lauren-tian) Climate ☐
- The Arctic or Polar Climate ☐

BIO-GEOGRAPHY**1. Soil Characteristics**

- Soil Characteristics ☐
- Factors Responsible for Soil Formation ☐
- Stages of Soil Formation ☐
- Soil Forming Processes ☐
- Soil Profiles and Horizons ☐
- Soil Classification ☐
- Soil Erosion and Conservation ☐

- 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 ☐

2. 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 ☐

- Indirect deforestation ☐
- Underlying causes of deforestation ☐
- Conservation of forests ☐
- Forest conservation strategies ☐
- Reforestation ☐
- Monoculture plantation ☐
- Afforestation ☐
- Types of forestry ☐
- Social forestry ☐
- Agro-forestry ☐

HUMAN AND ECONOMIC GEOGRAPHY OF THE WORLD**1. Demography and Census**

- Concept of human resources ☐
- Factors affecting the distribution of Population ☐
 - Geographical Factors ☐
 - Availability of water ☐
 - Landforms ☐

- Climate ☐
- Soils ☐
- Economic Factors ☐
 - Minerals ☐
 - Urbanisation ☐
 - Industrialisation ☐

- | | | | |
|--|--------------------------|--|--------------------------|
| ◦ Socio-cultural factors | <input type="checkbox"/> | ■ Declining Population | <input type="checkbox"/> |
| ➤ Population Growth | <input type="checkbox"/> | ◦ Literacy – literacy Rate | <input type="checkbox"/> |
| ◦ Growth of Population | <input type="checkbox"/> | ◦ Rural Urban Composition | <input type="checkbox"/> |
| ◦ Growth Rate of Population | <input type="checkbox"/> | ◦ Occupational Structure | <input type="checkbox"/> |
| ◦ Natural growth of Population | <input type="checkbox"/> | ◦ Religion based Composition | <input type="checkbox"/> |
| ◦ Positive Growth of Population | <input type="checkbox"/> | ➤ Population problems | <input type="checkbox"/> |
| ◦ Negative Growth of Population | <input type="checkbox"/> | ◦ Population problems of developing countries | <input type="checkbox"/> |
| ➤ Components of Population change | <input type="checkbox"/> | ◦ Population problems of developed countries | <input type="checkbox"/> |
| ◦ Crude Birth Rate | <input type="checkbox"/> | ◦ Population Policies: of China, of India | <input type="checkbox"/> |
| ◦ Crude Death Rate | <input type="checkbox"/> | ➤ Census 2011 | <input type="checkbox"/> |
| ◦ Migration – Place of Origin and Place of Destination | <input type="checkbox"/> | ◦ Census Terminologies | <input type="checkbox"/> |
| ◦ Immigration | <input type="checkbox"/> | ◦ Census of India important information | <input type="checkbox"/> |
| ◦ Emigration | <input type="checkbox"/> | | |
| ◦ Push Factors and Pull Factors | <input type="checkbox"/> | | |
| ➤ Trends in Population Growth | <input type="checkbox"/> | 2. Human Development | |
| ➤ Doubling time of world population | <input type="checkbox"/> | ➤ Growth vs Development | <input type="checkbox"/> |
| ➤ Spatial pattern of Population change | <input type="checkbox"/> | ➤ The four pillars of Development | <input type="checkbox"/> |
| ➤ Impact of Population Change | <input type="checkbox"/> | ◦ Equity | <input type="checkbox"/> |
| ➤ Demographic Transition | <input type="checkbox"/> | ◦ Sustainability | <input type="checkbox"/> |
| ◦ Demographic Transition Theory | <input type="checkbox"/> | ◦ Productivity | <input type="checkbox"/> |
| ◦ Demographic Cycle | <input type="checkbox"/> | ◦ Empowerment | <input type="checkbox"/> |
| ➤ Theories of population growth | <input type="checkbox"/> | ➤ Approaches to Human Development | <input type="checkbox"/> |
| ◦ Malthusian theory | <input type="checkbox"/> | ➤ Measuring Human Development | <input type="checkbox"/> |
| ◦ Marxian theory | <input type="checkbox"/> | ◦ Income Approach | <input type="checkbox"/> |
| ◦ Demographic Transition Theory | <input type="checkbox"/> | ◦ Welfare Approach | <input type="checkbox"/> |
| ◦ Optimum population | <input type="checkbox"/> | ◦ Basic Needs Approach | <input type="checkbox"/> |
| ◦ Over-population | <input type="checkbox"/> | ◦ Capability Approach | <input type="checkbox"/> |
| ◦ Under-population | <input type="checkbox"/> | ➤ International Comparisons of Human Development | <input type="checkbox"/> |
| ➤ Population Control Measures | <input type="checkbox"/> | | |
| ➤ World population distribution, Density and Growth | | 3. Economic activities | |
| ◦ Continent-wide distribution of population | <input type="checkbox"/> | ➤ Primary Activities | <input type="checkbox"/> |
| ◦ Pattern of population density globally | <input type="checkbox"/> | ◦ Hunting and Gathering Pastoralism | <input type="checkbox"/> |
| ◦ Population increase in the world | <input type="checkbox"/> | ◦ Nomadic Herding | <input type="checkbox"/> |
| ➤ Population Composition | <input type="checkbox"/> | ◦ Commercial livestock Rearing | <input type="checkbox"/> |
| ◦ Sex composition | <input type="checkbox"/> | ◦ Agriculture | <input type="checkbox"/> |
| ■ Sex Ratio | <input type="checkbox"/> | ■ Subsistence Agriculture | <input type="checkbox"/> |
| ■ Natural Advantage vs Social Advantage | <input type="checkbox"/> | ■ Primitive Subsistence Agriculture | <input type="checkbox"/> |
| ◦ Age Structure | <input type="checkbox"/> | ■ Intensive Subsistence Agriculture | <input type="checkbox"/> |
| ■ Age – sex Pyramid | <input type="checkbox"/> | ■ Plantation Agriculture | <input type="checkbox"/> |
| ■ Expanding Populations | <input type="checkbox"/> | ■ Extensive Commercial Grain Cultivation | <input type="checkbox"/> |
| ■ Constant Population | <input type="checkbox"/> | ■ Mixed Farming | <input type="checkbox"/> |

- Dairy Farming ☐
- Mediterranean Agriculture ☐
- Viticulture ☐
- Market Gardening and Horticulture – Truck Farming ☐
- Cooperative Farming ☐
- Collective Farming ☐
- Mining ☐
 - Factors affecting Mining ☐
 - Methods of Mining – Open Cast and underground mining ☐
- Secondary Activities ☐
 - Manufacturing ☐
 - Characteristics of Modern large scale Manufacturing ☐
 - Specialisation of Skills/ methods of Production, Mechanisation - Technological Innovation ☐
 - Access to market, Access to labour Supply, Access to Sources of Energy, Access to Transportaion and communication Facilities ☐
 - Government Policy ☐
- Classification of Manufacturing Industries ☐
 - Industries based on size ☐
 - Small Scale manufacturing ☐
 - Large Scale manufacturing ☐
 - Industries based on Inputs/ Raw Materials ☐
 - Agro Based industries ☐
 - Mineral Based Industries ☐
 - Chemical based Industries ☐
 - Forest based Raw material using industries ☐
 - Animal Based industries ☐
 - Industries based on Output/Product ☐
 - Industries based on ownership ☐
- Tertiary, Quaternary and Quinary Activities ☐
 - Types of Tertiary Activities ☐
 - Retail trading ☐
 - Trade and commerce ☐
 - Wholesale Trading ☐
 - Transport ☐
 - Communication ☐
 - Services ☐

- People engaged in tertiary Activities ☐
 - Tourism ☐
 - Medical Services ☐
 - Quaternary Activities ☐
 - Quinary Activities ☐
- Concept of Digital Divide ☐

4. Transport and Communication

- Transport ☐
 - Modes of Transportation ☐
 - Land Transport ☐
 - Roads ☐
 - Railways ☐
 - Water Transport ☐
 - Sea Routes ☐
 - Inland Waterways ☐
 - Air Transport ☐
 - Pipelines ☐
- Communications ☐
 - Satellite communication ☐
 - Cyber space internet ☐

5. International Trade

- History of international Trade ☐
- Basis of International Trade ☐
 - Difference in national resources ☐
 - Population Factors ☐
 - Stage of Economic Development ☐
 - Extent of Foreign Investment ☐
 - Transport ☐
- Important aspects of International Trade ☐
 - Volume of Trade ☐
 - Composition of Trade ☐
 - Direction of Trade ☐
 - Balance of Trade ☐
- Types of International Trade ☐
- Case of Free Trade ☐
- WTO – World Trade Organisation and Regional Trade Blocs ☐
- Gateways of International Trade ☐
 - Ports ☐
 - Industrial Ports ☐

- Commercial Ports ☐
- Comprehensive Ports ☐
- Inland Ports ☐
- Out Ports ☐
- Oil Ports ☐
- Port of call ☐
- Packet station ☐
- Entrepot Ports ☐
- Naval Ports ☐

6. Settlement

- ▶ Types and Patterns of settlements ☐
 - Compact of Nucleated Settlements ☐
 - Dispersed settlement ☐
- ▶ Rural Settlements ☐
 - Factors affecting location of ☐

- rural settlements
- Patterns of Rural settlements ☐
- ▶ Urban Settlements ☐
 - Classification of Urban Settlements ☐
 - Factors affecting location of rural settlements ☐
 - Functions of Urban Centre ☐
 - Classification of Towns on the basis of Forms ☐
 - Types of Urban Settlements ☐
 - Town, City, Conurbation, Megalopolis, Million City ☐
- ▶ Issues of Urbanization in India ☐
- ▶ Rural Urban Migration ☐
- ▶ Emergence of Slums ☐
- ▶ Inclusive Cities/Smart cities ☐

INDIAN GEOGRAPHY

1. Physiography of India

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

2. Drainage System

- ▶ Classification of Drainage ☐
- ▶ Himalayan Drainage ☐
- ▶ Indus river system ☐

- ▶ Indus drainage system ☐
- ▶ Ganga River System ☐
- ▶ Brahmaputra river system ☐
- ▶ Peninsular River System ☐
- ▶ East flowing Rivers ☐
- ▶ West flowing Rivers ☐
- ▶ Mains Rivers and their tributaries ☐
- ▶ Famous cities and river banks ☐

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 ☐
- ▶ Seasonal rhythm ☐
- ▶ Koppen's Climatic classification ☐
- ▶ Indian Droughts and Floods ☐

4. Soils in India

- ▶ Soil Acidity ☐

- Soil textures ☐
- Minerals of Soil ☐
- Soil Erosion ☐
- Soil Conservation ☐

5. Natural Vegetation

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

6. Population

- Size, growth rate and distribution of population ☐
- India in World Population ☐
- Demographic transition ☐
- Census in India ☐
- Ranking of States and Union ☐
- Territories by population: 2001 & 2011 ☐
- Population Growth Rates ☐
- Population: States and UT ☐
- Decadal growth rate ☐
- National Population Policy ☐
- Density of population ☐
- Literacy ☐
- Literacy in major states ☐
- Literacy rate in India: 1951-2011 ☐
- Ranking of States and UTs by 206 literacy rate: 2011 ☐
- Gender composition of the Population ☐
- Trends in Sex Ratio in India ☐
- Child sex ratio in age group 0-6 yrs ☐
- Sex ratio of age 7 years and above population ☐
- Old Age People ☐
- Health Indicators ☐

7. Settlements and Urbanization

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

8. Land Resource

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

9. Mineral Resource

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

10. 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 ☐
- Byproducts of coal ☐
- Conservation of Coal ☐
- Petroleum ☐
- Nature and properties of petroleum ☐
- Origin and recovery ☐
- Exploration ☐
- Petroleum refining ☐
- Petroleum reserves ☐
- Producing areas ☐
- Consumption of petroleum ☐
- International trade ☐
- OPEC and its role in oil trade ☐
- Natural gas: Reserves and Production ☐
- Hydro-electricity ☐
- Advantages of hydro-electricity ☐
- Ideal conditions for generation of hydro-electricity ☐
- Distribution of potential hydro-power ☐
- Hydro-electric power generation in India ☐
- Atomic (nuclear) energy ☐
- Atomic: source minerals: Uranium ☐
- World distribution of Uranium ☐
- Production of Uranium ☐
- Thorium ☐
- Production of Atomic (Nuclear) Energy ☐
- Nuclear Energy ☐
- Alternative (non-conventional) sources of energy ☐
- Solar energy ☐
- Wind energy ☐
- Geothermal power ☐
- Tidal energy ☐
- Wave energy ☐
- Biomass energy ☐

11. Agriculture Basic Terminologies

- Performance of the agriculture sector ☐
- Types of farming in India ☐
- Dry zone farming ☐

- Organic farming ☐
- Cropping seasons in India ☐
- Cropping Pattern in India ☐
- Agriculture regionalization ☐
- Infrastructure factors: Seeds; Fertilizers; Irrigation ☐
- Land use pattern in India ☐
- Institutional Factors as land reform ☐
- Horticulture sector in India ☐
- Agricultural revolutions ☐
- Agricultural labours ☐
- Price Policy for Agriculture ☐
- Agricultural marketing ☐
- Agricultural Insurance ☐
- Agricultural Census ☐
- Major schemes in agricultural sector ☐
- National Policy for farmers ☐
- Impact of climate change on agriculture ☐
- What is sustainable agriculture? ☐
- Use of IT in agriculture ☐
- Agriculture Issues and Challenges ☐

12. Recent developments in agriculture field

- NITI Aayog proposed the idea of taxation of agricultural income ☐
- Removing agricultural commodities from the essential commodities Act: NITI Aayog ☐
- Feminization of Agriculture ☐
- e-auction portal : e-Rakam for selling agricultural produce ☐
- "AGRI-UDAAN" – Food and agri-business acceleration 2.0 to bring startup revolution ☐
- APEDA (Agricultural and Processed Food Products Export Development Authority Act) ☐
- SMAM (Sub-Mission on Agricultural Mechanization) ☐
- Jute-ICARE Project ☐
- Project CHAMAN ☐
- Doubling the farmers income: Ashok Dalwai Committee ☐
- RKVY-RAFTAAR ☐
- Agro Irradiation Centers ☐
- Agricultural Marketing and Farm Friendly Reforms Index ☐

- ▶ National Food Security Act ☐
- ▶ Digitization and Agriculture ☐
- ▶ Direct Benefit Transfer in Fertilizer Sector ☐
- ▶ Draft Regulation on Fortification of Foods ☐
- ▶ Law Commission Recommendation on Food Laws ☐
- ▶ Concept of Modern Terminal Markets ☐
- ▶ Animal Husbandry, Dairying and Fisheries ☐
- ▶ e-Pashuhaat Portal ☐
- ▶ Schemes of Bio-Tech Kisan and Cattle Genomics ☐
- ▶ RashtriyaGokul Mission ☐
- ▶ Mission Fingerling ☐
- ▶ Ornamental Fishing ☐
- ▶ Agricultural Science Congress ☐
- ▶ RubSiS ☐
- ▶ Ethanol Blending ☐
- ▶ National Bureau of Plant Genetic Resources ☐
- ▶ Amendments to the NABARD Act, 1981 ☐
- ▶ Revenue Insurance Scheme for Plantation Crops ☐
- ▶ Neem Coating of Urea ☐
- ▶ National Agriculture Market ☐

13. 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 ☐
- ▶ Raw Silk ☐
 - Production pattern ☐
 - States ☐
- ▶ Natural Rubber ☐
 - Other sources of rubber ☐
 - Plantations in South-east Asia ☐
 - Production pattern ☐
- ▶ Sugarcane ☐

- Conditions of growth ☐
- Production pattern ☐
- International trade ☐
- Sugarbeet—Conditions of growth ☐
- Production pattern ☐
- Sugar industry ☐
- Sugar consumption ☐
- International trade. ☐

14. Industry

- Industrial development ☐
- Iron and Steel Industry ☐
- Location of iron and steel industry ☐
- Development of iron manufacture ☐
- Distribution of iron and steel industry ☐
- Global steel production ☐
- International trade in Steel ☐
- Textile Industry ☐
- Cotton Textile Industry: Location of the industry ☐
- Recent trends in localization ☐
- Distribution and production of cotton textiles ☐
- Woollen textile industry: Location of the industry ☐
- Silk textile industry: Raw silk manufacture ☐
- Silk textile manufacturing ☐
- Synthetic (artificial) silk industry ☐
- Distribution of man-made fibre and fabrics ☐
- Engineering Industries ☐
- Machine tools and machines: Areas of production ☐
- Industrial machinery: Textile machinery ☐
- Agricultural machinery ☐
- Manufacturing of transport equipment ☐
- Automobile industry ☐
- Shipbuilding ☐
- Aircrafts Industry ☐
- Fertilizer industry: Nitrogen fertilizers ☐
- Phosphate fertilizers ☐
- Potash fertilizers ☐
- Agro-industries ☐
- Synthetic rubber industry ☐
- Pulp and paper industry: Essential ☐

conditions for pulp production

- Production of paper and paper board ☐
- Newsprint ☐
- Cement industry ☐
- Distribution of cement industry ☐
- Recent trends: Main global competitors ☐
- Petroleum refining industry: Localization ☐
- Site selection of petroleum refineries ☐
- History of oil refineries ☐
- World pattern of oil refining ☐
- Petroleum products ☐
- Industrial Regions ☐
- Characteristics of industrial regions ☐
- Delimitation of an industrial region ☐
- Principal industrial regions of the world ☐
- Industrial regions of Anglo America—USA, Canada, Western Europe and Central Britain, Germany, Belgium, Netherlands, France, Italy, Eastern Europe, Poland, Former USSR ☐
- Eastern Asia—Japan, China, the 'Dragons', India, High tech patterns. ☐

15. Transport

- Importance and development of transport ☐
- Means of transport ☐
- Transport costs and economic distance ☐
- Operating costs in transport ☐
- Relative importance of means of transport: Railways, Roads, Pipeline, Oceans, Air transport ☐
- Profits and freight rates ☐
- Government's transport policy ☐
- Ocean transport routes ☐
- Inland waterways ☐
- Main regions of inland waterways ☐
- Railways: Factors affecting the railroads ☐
- Distribution of railroads in the world ☐
- Air transport: Factors influencing air transport ☐
- Air transport in various continents ☐
- Pipeline transport ☐
- Petroleum (oil) pipelines ☐
- Gas pipelines ☐

16. Recent Development in Transport Sector

- ▶ Rural electrification corporation: First green bond ☐
- ▶ Time and costs over runs of infrastructure projects ☐
- ▶ India's First Mega Coastal Economic Zone (CEZ) to come up in Maharashtra ☐
- ▶ Logistic sector gets infrastructure status ☐
- ▶ AIIB approves \$150 million for India infrastructure fund ☐
- ▶ Ro-Ro Ferry service ☐
- ▶ Bharatmala project for construction of 24,000 km of highway connecting Western and Eastern part ☐
- ▶ Union Ministry of shipping is planning to expand Logistics Data Bank (LDB) ☐
- ▶ Railways India Development Fund ☐
- ▶ National Infrastructure Investment Fund ☐
- ▶ Defence Innovation Fund ☐
- ▶ Flexi Fare Method in Railway ☐
- ▶ Rail Cadre Management ☐
- ▶ TRI-NETRA in Railways ☐
- ▶ National Rail Plan 2030 ☐
- ▶ India's First Caterpillar Train ☐
- ▶ Green corridor concept ☐
- ▶ Made in India 'Medha' train ☐
- ▶ Antyodaya Express ☐
- ▶ Smart Railway Station ☐
- ▶ Yatri Mitra Seva ☐
- ▶ National Highways Interconnectivity ☐
- ▶ Vehicle Fleet Modernization Programme ☐
- ▶ Transit Oriented Development Policy ☐
- ▶ Logistic Efficiency Enhancement Programme ☐
- ▶ Indian Bridge Management System ☐

- ▶ National Road Safety Policy ☐
- ▶ TARANG ☐
- ▶ E-trans ☐
- ▶ DEEP (Discovery of Efficient Electricity Price) ☐
- ▶ GARV II APP ☐
- ▶ Trading of Energy Saving Certificates ☐
- ▶ Powers for all 24x7 ☐
- ▶ Draft National Electricity Plan ☐
- ▶ Habitat Commitment Index ☐

17. Recent developments in Industrial Sector

- ▶ Disinvestment of PSUs ☐
- ▶ Report titled "India's Labor Market: A New Emphasis on Gainful Employment" ☐
- ▶ Wage code Bill in line of recommendations of 2nd National Commission on Labor ☐
- ▶ CAR for the operation of Drones in India. ☐
- ▶ Draft Evaluation template for the star rating of Minor Minerals ☐
- ▶ Online database containing GIS-Enabled portal Maps land related information ☐
- ▶ Chennai-Bangalore Industrial Corridor ☐
- ▶ Apex Corridor Developmental Authority ☐
- ▶ Tamra Portal ☐
- ▶ Mining Surveillance System ☐
- ▶ Coal Mitra ☐
- ▶ M-SIPS for Electronic Sector ☐
- ▶ Indian Enterprise Development Service ☐
- ▶ Trade Receivables Discounting System ☐
- ▶ SME Business Environment Index ☐



Remarks

WORLD REGIONAL GEOGRAPHY

1. Continents Countries and Cities

- Continents and Important Cities of the World ☐
- Important Cities Situated on the Banks of Rivers ☐
- Changed Names of Some Cities, States, and Countries ☐
- Distinctive Names of Countries/Towns—Geographical Epithets ☐
- Regional Grouping of Countries of the World ☐
- Economic Classification of Countries of the World ☐

2. Location in NEWS

- Govardhan Eco village ☐
- City livability index ☐
- Sardar Sarovar Dam in Gujarat ☐
- Yethinahole Project ☐
- SMARTGRAM ☐
- Kaladan project in Myanmar ☐
- Doklam plateau ☐
- Gilgit-Ballistan ☐
- SCO Summit-Astana ☐
- Bosphorus strait ☐
- Nathu-La ☐
- Lisbon ☐
- Mahadayi tribunal ☐
- Jaravas ☐
- Bengaluru declaration ☐
- SASEC road connectivity ☐
- Doklam ☐
- dams bottom trawling ☐
- Hambantota Port ☐

- World Petroleum Congress, Turkey ☐
- Kaleshwaram project ☐
- Mega food park in Kapurthala ☐
- Assam's disturbed area tag ☐
- North Koel project ☐
- BIMSTEC ☐
- Conservation of Pagodas to Bagan ☐
- Bridge over Mechi River ☐
- Pangong Lake ☐
- World's most liveable city ☐
- Asia Africa Corridor ☐
- Xiamen declaration ☐
- Sir Creek ☐
- Chakma, Majong Refugees Rohingya ☐
- Cleanest Iconic place Meenakshi temple ☐
- OBOR ☐
- Hambantota ☐
- Chahbahar Port ☐
- Gwadar Port ☐
- National Waterway – 4 ☐
- Polavaram project ☐
- UNESCO creative cities network ☐
- Singapore Changi Naval base ☐
- India in Antarctica ☐
- Concept of Resilient Cities ☐
- Sericulture ☐
- Blizzards ☐
- New tectonic plate discovered ☐
- Report on Palaeo Channel of North West India ☐
- Cyclones in News ☐



Remarks

ECOLOGY & ENVIRONMENT

ENVIRONMENTAL ECOLOGY

1. Origin of Life forms

- ▶ Origin of Life forms ☐
- ▶ Life on earth ☐

2. Basic Concepts of 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 ☐
 - Ecotone ☐
 - 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 ☐

3. Ecosystem functions

- ▶ 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 ☐

4. Population Ecology

- ▶ Types of species ☐
- ▶ Population Ecology ☐
- ▶ Population Growth Models ☐
- ▶ Methodology of Tiger census ☐
- ▶ Methodology of Lion Census ☐

5. Adaptation of Species and Interactions

- ▶ Adaptation ☐
 - Examples of adaptation in plants ☐
 - Examples of Adaptations in animals ☐
- ▶ Homeostasis ☐
- ▶ Interaction between Species ☐
- ▶ Ecotone ☐
- ▶ Endemic Species ☐
- ▶ Keystone Species ☐
- ▶ Indicator Species ☐
- ▶ Invasive Species ☐
- ▶ Allopatric and Sympatric Speciation ☐

6. Terrestrial ecosystems

- Terrestrial ecosystem ☐
- Forest Ecosystem in India ☐
- Grasslands ☐
- Tundra ☐
- Deserts ☐
- Mountains ☐

7. Aquatic ecosystem

- Aquatic ecosystem ☐
- Factors affecting the productivity of aquatic ecosystems ☐
- Fresh water ecosystem ☐
- Marine ecosystem ☐
- Marine Organisms ☐
- Plankton ☐
- Phytoplankton ☐
- Factors Affecting Phytoplankton Biodiversity ☐
 - Importance of phytoplankton ☐
 - Zooplankton ☐
 - Sea-grass ☐
 - Seaweeds ☐
- Human Modified Ecosystems ☐

8. Nutrient Cycling

- Concept of Biogeochemical Cycle ☐

- Parts of a Biogeochemical Cycle
- Types of Biogeochemical Cycle ☐
- Carbon Cycle ☐
 - Steps in the carbon cycle ☐
 - Carbon cycle: Long term and Short term ☐
 - Carbon act as Climate Buffer ☐
 - Human Impact on the Carbon Cycle ☐
 - Effects of high concentration of Greenhouse Gases ☐
- Hydrological Cycle ☐
 - Different Steps of the Hydrologic Cycle ☐
 - Storage ☐
- Nitrogen Cycle ☐
 - Human Impact on the Nitrogen Cycle ☐
- Oxygen Cycle ☐
- Sulphur Cycle ☐
 - Human Impact on the Sulphur Cycle ☐
- Phosphorus Cycle ☐
 - Human Influence on Phosphorus Cycle ☐

BIODIVERSITY**1. Basics of Biodiversity**

- Biodiversity ☐
- Types of biodiversity ☐
- Patterns of biodiversity ☐
- Bio-geographical classification of World ☐
- Bio-geographical classification of India ☐
- Functions of biodiversity ☐
- Hotspots of biodiversity ☐
- Bio informatics ☐
- Eco Regions ☐
- Role of Traditional Knowledge in Biodiversity ☐
- Biopiracy ☐

2. Animal and Plant Diversity

- Plant and Animal Kingdom ☐
 - Marine Mammals ☐
 - Egg laying Mammals ☐
 - Marsupials ☐

3. Threats to biodiversity

- Causes of Biodiversity losses ☐
- Effects of Loss of Bio-Diversity ☐
- Extinction of species ☐
- Mass Extinction ☐
- IUCN Red List and Classification Scheme ☐

4. Biodiversity Conservation

- ▶ Scheduled Animals in the Wildlife Protection Act ☐
- ▶ In-situ methods of Conservation ☐
 - Protected Area Categories ☐
 - Forms of Protected Areas ☐
 - Biosphere reserves ☐
 - Sacred forests and sacred lakes ☐
 - World Heritage sites ☐
 - Geo-heritage sites ☐
 - Advantages of In-situ conservation ☐
 - Disadvantages of In-situ conservation ☐
- ▶ Ex-situ methods of Conservation ☐
 - Advantages of ex-situ preservation: ☐
 - Disadvantages of Ex-situ conservation ☐
 - Zoological Parks ☐
 - Botanical Gardens ☐
 - Seed banks ☐
- ▶ National Parks ☐
- ▶ Wildlife Sanctuaries ☐
- ▶ Biosphere Reserves ☐
- ▶ Species based conservation programmes ☐
 - Project Tiger ☐
 - Project Elephant ☐
 - Project Snow Leopard ☐
 - Vulture conservation project ☐
 - Crocodile conservation project ☐
 - Ganges dolphin project ☐
 - Indian Rhino Vision ☐
 - Other projects ☐
 - India adopts SAWEN ☐
- ▶ Important Coastal and marine Biodiversity Areas ☐
- ▶ Global initiative ☐
 - State of Protected Areas in the World ☐
 - MAB – Man and Biosphere Programme ☐
 - World network of Biosphere Reserves ☐
 - Biodiversity Hotspots ☐
 - CBD – Convention of Biological Diversity ☐
 - Cartagena Protocol ☐
 - Nagoya Protocol ☐
 - Aichi Biodiversity Diversity ☐

5. Estuaries

- ▶ What are estuaries? ☐
- ▶ Types of Estuaries ☐
- ▶ Importance of estuaries ☐
- ▶ Threats to estuaries ☐
- ▶ Major Estuaries in Indian coastal states ☐
- ▶ Monitoring and Prediction of Health of Estuarine and Coastal Waters ☐
- ▶ Difference between Lagoon and Estuary ☐
- ▶ Estuary ecosystem: Adaptations made in organisms ☐
- ▶ Conservation of Estuaries ☐

6. Mangroves

- ▶ What are mangroves? ☐
- ▶ Mangroves in India ☐
- ▶ Importance of Mangroves ☐
- ▶ Mangroves under threats ☐
- ▶ Legal and Regulatory Approaches for Protection ☐
- ▶ Community based mangrove regeneration ☐

7. Coral Reef

- ▶ About coral reefs ☐
- ▶ What do corals feed on? ☐
- ▶ Geographical Conditions ☐
- ▶ Types Of Coral Reefs ☐
- ▶ Uses of coral reefs ☐
- ▶ Concept of Bio-rock reefs ☐
- ▶ Threats to Coral reefs ☐
- ▶ Conservation of coral reef ☐

8. Wetlands

- ▶ What are wetlands? ☐
- ▶ Types of wetlands ☐
- ▶ Wetlands in India ☐
- ▶ Importance of wetlands ☐
- ▶ Threats to wetland ecosystems ☐
- ▶ Conservation of Wetlands ☐
- ▶ About Ramsar Convention ☐
- ▶ About Asian Water bird Census ☐

RESOURCE DEGRADATION AND MANAGEMENT

1. Land Resource

- Causes of land degradation ☐
- Impact of land degradation ☐
- Desertification ☐
- Sustainable Land Management ☐

2. Forest resource

- Definition of forests by FSI ☐
- Types of Forest Cover ☐
- Forest Survey of India (FSI report 2017) ☐
- Types of Forests In India ☐
- Deforestation ☐
- Causes of Deforestation ☐
- Consequences of Deforestation on the Wildlife of India ☐
- Strategies for Reducing Deforestation ☐
- Government Programmes for Conservation of Forests ☐

3. Soil Resource

- Soil Characteristics and Soil formation process ☐
- Factors Responsible for Soil Formation ☐
- Soil Forming Processes ☐
- Soil Profiles and Horizons ☐
- Type of Soils ☐
- Soils in India ☐
- Soils in World ☐
- Soil Erosion ☐
- Problems due to excessive irrigation ☐
- Soil Conservation ☐
- Soil health card scheme ☐
- Organic Farming ☐

4. Water Pollution

- Surface Water Resource ☐
- Ground Water Resources ☐
- Sources of Water Pollution ☐
- Measurement of Water pollution ☐
- Causes of Water Pollution ☐
- Harmful effects of water pollution ☐
- Other terms associated with water pollution ☐
 - Algal Bloom ☐
 - Eutrophication ☐
 - Arsenic contamination of water ☐
 - Mercury Pollution ☐
 - Oxygen Stratification ☐

5. Energy Resources

- Ocean Thermal Energy Conversion ☐
- Tidal Energy ☐
- Wave energy ☐
- Fuel Cell ☐
- Microbial fuel cell ☐
- Biofuels ☐
- Biogas ☐
- Geothermal Energy ☐
- Solar Energy ☐
- New Energy Resources ☐
- Renewable Energy and Development ☐
- Petroleum Conservation Research Association ☐
- Atomic Energy Bill ☐
- Civil Liability for Nuclear Damage Bill ☐
- National Electric Mobility Mission Plan ☐
- National Policy on Biofuels ☐
- Three Stage Nuclear Power Programme ☐
- Solar Renewable purchase Obligation ☐
- Petroleum Planning & Analysis Cell ☐
- New Energy Policy ☐
- Energy Organisation ☐

ENVIRONMENTAL POLLUTION

1. Basics of Pollution

- Sources of pollution ☐
 - 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 ☐
- Classification of pollutants ☐
- Pollution Indicator species ☐

2. Mining and pollution

- 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 ☐

3. Air pollution

- Causes of air pollution ☐
- Harmful Effects of air pollution ☐
- Top-ten gases in air pollution ☐
- Control of Air Pollution ☐
- Concepts related to Air pollution ☐
 - Smog and its impact ☐
 - Ozone depletion ☐
 - Acid rain ☐
 - Respirable Suspended Particulate Matter (RSPM) ☐
 - Fly Ash ☐
 - Bharat stage Norm ☐
 - National Air Quality Index ☐
 - Comprehensive Environmental Pollution Index ☐

4. Marine Pollution

- Sources of marine pollution ☐
- Effects of marine pollution ☐
- Concept of dead zone ☐
- Concept of Ocean acidification ☐
- Oil spill ☐

- Trash and Other Debris in ocean ☐
- Microplastics and its impact ☐
- Coastal Regulation Zone Notification, 2011 ☐

5. Noise Pollution

- Causes of Noise pollution ☐
- Noise Levels ☐
- Effects of Noise Pollution on human health ☐
- Corrective actions ☐

6. Biological Pollution

- Sources of biological pollution ☐
- Harmful effects from biological contaminants ☐
- Corrective actions ☐

7. Radioactive Pollution

- Sources of Radioactive Pollution ☐
- Harmful effects of Radioactive Pollution ☐
- Corrective actions ☐

8. Thermal Pollution

- Causes of Thermal Pollution ☐
- Effect of Thermal Pollution ☐
- Control of Thermal Pollution ☐

9. Waste Management

- Solid waste management ☐
 - Types of Solid Waste ☐
 - What is solid waste management? ☐
 - Issues in solid waste management in India ☐
 - Waste Management Practices ☐
 - Technologies for the Generation of Energy from Waste ☐
 - Policy on Promotion of City Compost ☐
 - Salient features of SWM Rules, 2016 ☐
- E-Waste Management ☐
 - Pollutants and their health impacts ☐
 - E-waste status in India ☐
 - Importance of the E-waste management ☐
 - Steps taken for combating mounting E-Waste ☐

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|--|--|
| <ul style="list-style-type: none"> ◦ E-waste (Management & Handling) Rules, 2016 <input type="checkbox"/> ▶ Biomedical Waste Management <input type="checkbox"/> <ul style="list-style-type: none"> ◦ Hazards associated with waste management <input type="checkbox"/> ◦ Bio-Medical Waste Management Rules, 2016 <input type="checkbox"/> ▶ Hazardous waste and its Characteristics <input type="checkbox"/> | <ul style="list-style-type: none"> ▶ Hazardous and Other Wastes (Management & Trans-boundary Movement) Rules, 2016 <input type="checkbox"/> ▶ Treatments Methods in Waste Management <input type="checkbox"/> <ul style="list-style-type: none"> ◦ Methods for sewage treatment <input type="checkbox"/> ◦ Treatments Methods for waste management <input type="checkbox"/> ▶ Hazardous waste treatment <input type="checkbox"/> |
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CLIMATE CHANGE

1. Climate Change Basics

- ▶ What is Climate Change? ☐
- ▶ What is Global warming? ☐
- ▶ Factors Affecting Climate Change ☐
- ▶ Causes of climate change ☐
 - Extra-Terrestrial Sources of Climate Change ☐
 - Terrestrial Sources of Climate Change ☐
 - Anthropogenic sources of Climate Change ☐
- ▶ Urbanization and climate change ☐
 - Pollution in metros and climate change ☐
 - Real estate boom and environment degradation ☐
 - Urban Heat Island ☐
 - Polythene bags and pollution ☐
 - Methane generation from waste ☐
- ▶ 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 ☐

- ▶ What is greenhouse effect? ☐
- ▶ Non green House Gases and Aerosols ☐
- ▶ Radioactive forcing and global warming ☐
- ▶ Ecological footprint ☐
- ▶ Carbon footprint ☐
- ▶ Global Warming Potential (GWP) ☐

2. Climate Change Impact

- ▶ Impacts of the Climate Change ☐
 - Acid Rain ☐
 - El Nino ☐
 - La Nina ☐
 - Ozone Depletion ☐
 - Ocean Acidification ☐
- ▶ Global Warming & Health ☐
 - Health impacts of global warming ☐
 - Mosquito-borne diseases ☐
 - Ozone depletion and human health ☐
- ▶ Climate change mitigation ☐
 - Carbon Sequestration ☐
 - Carbon Sink ☐
 - Carbon Credit ☐
 - Carbon Tax ☐

ENVIRONMENTAL GOVERNANCE

1. Acts and Policies

- ▶ Constitutional Provisions related to environment ☐
- ▶ Wildlife Protection Act 1972 ☐
- ▶ Environmental Protection Act ☐
- ▶ National Forest Policy ☐
- ▶ Biological Diversity Act 2002 ☐
- ▶ Schedule Tribes and Other Forest ☐
- ▶ Dwellers Act 2006 ☐
- ▶ Coastal Regulation Zone ☐
- ▶ Wetland Rules 2010 ☐
- ▶ National Green Tribunal ☐
- ▶ Ozone Depleting Substance Rules ☐

2. Environment Impact Assessment (EIA)

- ▶ What is EIA? ☐
- ▶ Brief History of EIA in India ☐
- ▶ EIA Process in India ☐
- ▶ The 8 steps of the EIA process ☐
- ▶ Environmental Appraisal Process ☐
- ▶ Drawback in EIA Process ☐
- ▶ Recommendations for Improvement ☐
- ▶ Environment Management ☐
- ▶ EIA in India – Sectorial Analysis ☐
 - Mining Sector ☐
 - Agricultural Sector ☐
 - Industrial Sector ☐

3. International Environmental Governance

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

- ▶ Various Indices relate to Environment ☐
- ▶ Climate Change Governance ☐
 - United Nations Conference on the Human Environment (Stockholm Conference) ☐
 - United Nations Environment Programme (UNEP) ☐
 - Montreal Protocol and Kigali Agreement ☐
 - The Earth Summit: United Nations Conference on Environment and Development (UNCED), Rio de Janeiro, 1992 ☐
 - Global Environment Facility (GEF) ☐
 - Rio Declaration: 1992 ☐
 - Agenda 21:1992 ☐
 - Commission on Sustainable Development (CSD) ☐
 - United Nations Convention to Combat Desertification (UNCCD) ☐
 - United Nations Framework Convention on Climate Change (UNFCCC): 1992 ☐
- ▶ Global Climate Finance Architecture ☐

4. India and Climate Change

- ▶ India's Position with regards to policy on Climate Change ☐
- ▶ Observed Climate and Weather Changes in India ☐
- ▶ NAPCC ☐
- ▶ Indian Climate Change Assessment ☐
- ▶ Indian Policy Structure Relevant to GHG Emissions ☐

5. Environment related Institutions in India

- ▶ Pollution Control Boards ☐
- ▶ National Green Tribunal ☐
- ▶ National Board for Wildlife ☐
- ▶ Animal Welfare Board ☐
- ▶ Central Zoo Authority ☐
- ▶ National Biodiversity Authority ☐

6. Environmental schemes in India

- ▶ National Wildlife Action Plan ☐
- ▶ CAMPA ☐

- Joint Forest Management ☐
- Social Forestry ☐
- National Bamboo Mission ☐
- National Action Plan on Climate Change ☐
- National Solar Mission ☐
- Ganga Rejuvenation Plan ☐
- Benefits of River Ganga ☐
 - Facts about Ganga River Pollution and its impacts ☐
- Ecomark Scheme ☐
- Swachh Bharat Mission ☐
- Swachh Bharat Kosh ☐
- Grants in Aid Scheme ☐
- National Afforestation Program ☐
- National River Conservation Plan ☐
- National Mission for Clean Ganga ☐
- National Air Quality Index (AQI) ☐
- National Action Programme to Combat Desertification ☐
- Pradhan Mantri Sauchalay Yojana ☐
- UJALA Scheme ☐
- Bharat Stage Norms ☐
- Corporate Social Responsibility and Environment Protection ☐

7. APPENDIX

- National Parks ☐
- Tiger Reserves of India ☐
- Elephant Reserves in India ☐
- Mike Sites in India ☐
- Biosphere Reserves ☐
- Biosphere Reserves in UNESCO's Map List ☐
- Ramsar Wetland Sites ☐
- Natural World Heritage Sites ☐
- List of Sacred Groves ☐
- Mangrove Sites in India ☐
- Pollution ☐
 - Key activities and Likely Associate Air Pollutants ☐
 - Respiratory Irritants and Toxic Chemicals ☐

8. Recent developments

- Mobile Tower Radiation ☐

- Shrinking of Cauvery Delta ☐
- Use of Garbage to Construct Road ☐
- Moss as Pollution Monitor ☐
- Graded Plan for Air Pollution ☐
- Air Quality Index ☐
- Polluter Pay Principle ☐
- Pesticide Poisoning ☐
- Aerosols ☐
- Anti-Smog guns ☐
- Particulate matter ☐
- Nalanda Model of Water Conservation ☐
- Wetland Rules, 2017 ☐
- Permaculture and Monoculture ☐
- Sand Mining Guidelines ☐
- Coastal Erosion (Parali Island) ☐
- Bottom Trawling to Deep Sea Fishing ☐
- 'Wadi' Model ☐
- Re-greening of Village Commons Project ☐
- Warsaw International Mechanism for Loss and Damage ☐
- Namami Ganga Programme ☐
- River Ganga (Rejuvenation, Protection and Management) Authorities Order, 2016 ☐
- Smart Ganga City Scheme ☐
- Ganga Task Force ☐
- Ganga, Yamuna termed 'living persons' ☐
- National Capacity Building Project for Waste Management ☐
- NGT Bans Plastic ☐
- Mission Innovation ☐
- Tribunal – Dumping Waste in Ganga ☐
- Ease in Norms for Sewage Plants ☐
- Organic Waste to Make Green Fuel ☐
- New Technologies for Waste Management ☐
- Melting of Antarctic Iceberg ☐
- Melting of Gangotri Glacier ☐
- Carbon Capture ☐
- Black Carbon ☐
- 30th Montreal Protocol and World Ozone Day ☐
- El-Nino Caused Record CO₂ Spike ☐
- Glaciers in Asia to sink ☐
- Tropics emit more Carbon ☐

- | | | | |
|--|--------------------------|---|--------------------------|
| ▶ Climate change impact on Natural Heritage Sites - Impact on Sunderbans | <input type="checkbox"/> | ▶ COP-23 | <input type="checkbox"/> |
| ▶ Marine Diversity in Antarctica under threat | <input type="checkbox"/> | ▶ Air Quality Index likely to be added to 'playing condition' | <input type="checkbox"/> |
| ▶ Carbon Credit | <input type="checkbox"/> | ▶ HFCs - India to eliminate use by 2030 | <input type="checkbox"/> |
| ▶ 2 nd Kyoto Protocol | <input type="checkbox"/> | ▶ Kigali agreement | <input type="checkbox"/> |
| ▶ Green Metro System | <input type="checkbox"/> | ▶ Carbon Neutrality Concept | <input type="checkbox"/> |
| ▶ Negative Emissions | <input type="checkbox"/> | ▶ Marrakesh Climate Change Conference | <input type="checkbox"/> |
| ▶ Geo-engineering Climate Change | <input type="checkbox"/> | ▶ International Solar Alliance (ISA) | <input type="checkbox"/> |
| ▶ Sequestering CO ₂ | <input type="checkbox"/> | ▶ Kyoto Protocol (2 nd Commitment 2013-20) | <input type="checkbox"/> |
| ▶ Bonn Challenge | <input type="checkbox"/> | ▶ Climate Change Performance Index | <input type="checkbox"/> |

 *Remarks*

INDIAN POLITY AND GOVERNANCE

EVOLUTION OF THE CONSTITUTION

1. The Company Rule (1773-1858)

- Regulating Act, 1773 ☐
- Amending Act, 1781 ☐
- Pitt's India Act, 1784 ☐
- Amending Act of 1786 ☐
- Charter Act, 1793 ☐
- Charter Act, 1813 ☐
- Charter Act, 1833 ☐
- Charter Act, 1853 ☐

2. The Crown Rule (1858-1947)

- Government of India Act, 1858 ☐
- Indian Councils Act, 1861 ☐
- Indian Councils Act, 1892 ☐

- Indian Councils Act, 1909 ☐
- Government of India Act, 1919 ☐
- Simon Commission ☐
- Government of India Act, 1935 ☐
- Indian Independence Act, 1947 ☐

3. Drafting and Sources of Indian Constitution)

- Seminal Sources ☐
- External Sources ☐
- Developmental Sources ☐
- Constitutional Practices ☐
- Important Committees of the Constituent Assembly and their Chairman ☐

SALIENT FEATURES OF INDIAN CONSTITUTION

1. Constitution and Types

- What is a Constitution? ☐
- Types of Constitution ☐
- Functions of the Constitution ☐
- Historical evolution of the Constitution ☐
- Constituent Assembly ☐
- Objectives of the Constitution ☐
- Unitary features ☐
- Federal features ☐

2. Types of Political System

- Types of Political System ☐
- Types of Government ☐
- Parliamentary form of government ☐
- Features of the Presidential System ☐

- Features of Semi-Presidential System ☐

3. Types of Majorities as per the Indian Constitution

- Absolute Majority ☐
- Effective Majority ☐
- Simple Majority ☐
- Special Majority ☐

4. Preamble and Values in the Constitution

- The objectives laid down in the Preamble ☐
- Whether the Preamble is a part of the Constitution or not? ☐
- Whether Preamble can be amended or not? ☐

- Ideals (mentioned in the Preamble) ☐
- Democratic ☐
- Sovereign ☐
- Socialist ☐
- Secular ☐
- Republic ☐
- Justice ☐
- Equality ☐
- Liberty ☐
- Fraternity ☐
- Integrity ☐

5. Amendment of The Constitution

- Procedure for amendment ☐
- Types of Amendments ☐
- Amendability of FR's ☐
- Ingredients of basic structure ☐

6. Doctrine and Terms

- Doctrine of severability ☐
- Validity of Re-Constitutional Laws ☐
- Doctrine of Eclipse ☐
- Doctrine of Harmonious Construction ☐
- Doctrine of Pith and Substance ☐
- Doctrine of Colorable Legislation (Article 246) ☐
- Doctrine of Territorial Nexus ☐
- Doctrine of Laches ☐
- Due Process of Law ☐
- Procedure Established by Law ☐

7. Other Constitutional Dimensions

- Schedules and Subjects ☐
- Official Languages ☐

UNION & ITS TERRITORY

1. ARTICLE 1-4

- Article 1: Name and Territory of the Union ☐
- Committee/commission for State Re-organisation ☐
- The State Reorganization Commission (SRC) 1953 ☐
- Article 2: Admit or Establish new State ☐

- Article 3: Formation of new States and alternation of areas, boundaries or names of existing States ☐
- Article 4: Laws made under articles 2 and 3 to provide for the amendment of the First and the Fourth Schedule and Supplemental. ☐
- Delimitation Commission ☐

CITIZENSHIP

1. Constitutional Provisions

- Constitutional provisions of citizenship ☐
- Citizenship Act, 1955 ☐
- The Citizenship (Amendment) Act, 2016 ☐
- Methodology of getting citizenship ☐
- Modes of Losing the Citizenship of India ☐
- Concept of dual citizenship ☐

- Special privileges enjoyed by citizens in India ☐
- Rights and Duties of Citizens ☐

2. Indian Diaspora

- Pravasi Bhartiya Divas ☐
- Non-Resident Indians ☐

FUNDAMENTAL RIGHTS

1. Evolution Objectives And Features

- Meaning ☐
- Objectives ☐

- Features ☐
- Importance ☐
- Restrictive limitations on fundamental rights ☐

2. Article 12 and Article 13

- Definition of state ☐
- Laws Inconsistent with Fundamental Rights ☐

3. Right to Equality

- Article 14: Equality before the law or the Equal protection of Law ☐
- Article 15: Prohibition of Discrimination on the grounds of religion, race, caste, sex or place of birth ☐
- Article 16: Equality of Opportunity in matters of Public Employment ☐
- Article 17: Abolition of Untouchability ☐
- Article 18: Abolition of Titles ☐

4. Right to Freedom

- Article 19 ☐
- Article 20: (Protection in respect of conviction for offenses) ☐
- Article 21: Protection of life and personal liberty ☐
- Article 22: Protection against arrest and detention ☐

5. Right against Exploitation

- Article 23: Prohibition of Traffic in human beings and forced labour ☐
- Article 24: Prohibition of employment of children in factories, etc ☐

6. Right to Freedom of Religion

- Article 25: Freedom of conscience and free profession, practice and propagation or religion ☐
- Article 26: Freedom to manage religious affairs ☐
- Article 27: Freedom from payment of taxes for promotion of any particular religion. ☐
- Article 28: Freedom from attendance religious instruction or worship in educational institutions ☐

7. Cultural and Educational Rights

- Article 29: Protection of interest of Minorities ☐
- Article 30: Right of minorities to establish and administer educational institutions ☐

8. Right to Constitutional Remedies

- Article 32: Right to Constitutional Remedies: ☐
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 - Mandamus ☐
 - Certiorari ☐
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- Article 34 ☐
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- Types ☐
- Amendments ☐
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- Article: 39 ☐
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- Relation between of Fundamental Rights and Fundamental Duties ☐
- List Of Fundamental Duties ☐
- 86th Constitutional Amendment Act 2003 : RTE ☐

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- Fundamental Duties - Awareness Campaigns is the Duty of Centre ☐

- National Anthem - Mandatory in Cinema Halls - Article 51(a) ☐
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- Related to Territorial Powers ☐
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- Sarkaria Commission's Opinion on Legislative Relations ☐
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- Sarkaria Commission's Opinion on Administrative Relations ☐
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- Inter state water dispute ☐

- Inter state councils ☐
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- Provisions for Maharashtra and Gujarat, Nagaland, Assam and Manipur ☐
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- Conditions of Office ☐
- Term of Office ☐
- Election ☐
- Manner of Election ☐
- Impeachment of the President ☐
- Impeachment of the President ☐
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- Powers of the President ☐
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- Vacancy ☐
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- Eligibility ☐
- Powers and Functions of Prime Minister ☐
- Relationship between the President and the Prime Minister ☐
- Deputy Prime Minister ☐
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- Article 74: Council of Ministers to aid and advice President ☐
- Article 75: Other Provisions as to Ministers ☐
- Article 77: Conduct of Business of the Government of India ☐
- Article 78: Duties of Prime Minister ☐
- Nature of advice by Ministers ☐
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- Appointment of a Non-legislator as a Minister ☐
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- Organisation of Parliament ☐
- Qualifications and Disqualifications for being a Member of Parliament (Article 84) ☐
- Functions of the Parliament ☐
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- Sessions of Parliament ☐
- Devices of Parliamentary Proceedings ☐
- Parliamentary Privileges and Immunities ☐
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2. Parliament, Lok Sabha and Rajya Sabha

- Lok Sabha Composition ☐
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- Presiding Officers of the Parliament ☐
- Speaker ☐
- Powers & Functions of the speaker ☐
- Deputy Speaker ☐
- Panel of Chairpersons of Lok Sabha ☐
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3. Legislative Procedure and Committees of Parliament

- ▶ Legislative Procedure in Parliament ☐
- ▶ Ordinary Bill ☐
- ▶ Money Bill ☐
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- ▶ Constitution Amendment Bill ☐
- ▶ Lapsing of Bills ☐

- ▶ Annual Financial Statement: Budget (Article 112) ☐
- ▶ Demand of Grants ☐
- ▶ Appropriation Bill ☐
- ▶ Cut motions ☐
- ▶ Stages in Enactment of Budget ☐
- ▶ Other Grants ☐
- ▶ Related Information of Budget ☐
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- ▶ Article 152: Definition ☐
- ▶ Article 153: Governors of States ☐
- ▶ Article 154: Executive power of State ☐
 - Powers of Governor ☐
 - Executive power ☐
 - Legislative power ☐
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- ▶ Discretionary power ☐
- ▶ Article 155: Appointment of Governor ☐
- ▶ Article 156: Term of office of Governor ☐
- ▶ Article 157: Qualifications for Appointment as Governor ☐
- ▶ Article 158: Conditions of Governor's office ☐
- ▶ Article 159: Oath or affirmation by the Governor ☐
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- ▶ Article 161 ☐

- ▶ Article 162: Extent of executive power of State ☐

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- ▶ ARC (Administrative Reforms Commission) ☐
- ▶ Sarkaria Commission ☐
- ▶ National Commission to Review the working of the Constitution ☐

2. The Chief Minister and the CoM

- ▶ Powers and Functions of Chief Minister ☐
 - In Relation to Council of Ministers ☐
 - In relation to the Governor ☐
 - In Relation to State Legislature ☐
 - Other Powers and Functions ☐
- ▶ Composition of the Council of Ministers ☐
- ▶ Responsibility of Ministers ☐
- ▶ Advocate-General for the State ☐

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1. Legislative Assembly

- ▶ Legislative Assembly (Vidhan Sabha) ☐
- ▶ Powers and Functions ☐
- ▶ Speaker & Deputy Speaker ☐
- ▶ Parliament's Control over State Legislature ☐

2. Legislative Council (Article 169)

- ▶ Qualifications ☐
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1. Panchayati Raj

- ▶ Evolution of the Panchayati Raj Institution (PRI) ☐
- ▶ 73rd Amendment Act of 1992 ☐
- ▶ Compulsory and Voluntary Provisions ☐

2. Urban Local Government

- ▶ 74th Constitutional Amendment Act ☐
- ▶ Types of Urban Governments In India ☐

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1. Union Territories

- ▶ Creation of Union Territories ☐
- ▶ Administration of UT's ☐
- ▶ Special provisions for Delhi ☐

- ▶ Special Category Status ☐

2. Schedule and Tribal Areas

- ▶ Administration of Schedule Areas ☐
- ▶ Administration of Tribal areas ☐

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1. The Supreme Court

- ▶ Chief Justice of India ☐
- ▶ Acting Chief Justice of India ☐
- ▶ Appointment of Supreme Court Judges ☐
- ▶ Qualifications for Supreme Court Judges ☐
- ▶ Removal of a Supreme Court Judges ☐
- ▶ Process of Impeachment ☐
- ▶ Ad hoc and Retired Judges ☐
- ▶ Salaries and allowances of Supreme Court Judges ☐
- ▶ Chief Justices of India (Since 1951) ☐
- ▶ Jurisdiction of the Supreme Court ☐
- ▶ Judicial Independence ☐
- ▶ Judiciary Executive Relations ☐

2. The High Court Subordinate Courts & Lok Adalats

- ▶ The High Courts ☐
- ▶ Jurisdiction of the High Courts ☐
- ▶ Subordinate Courts ☐
- ▶ Gram Nyayalayas Act, 2008 ☐
- ▶ Alternative dispute Resolution ☐
- ▶ Lok Adalat ☐
- ▶ All India Judicial Service ☐
- ▶ E-governance in Judiciary ☐
- ▶ Judicial Impact Assessment ☐
- ▶ Judges Standards and Accountability Bill, 2010 ☐
- ▶ National Legal Services Authority (NALSA) ☐

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1. Constitutional Bodies

Finance Commission ☐

- ▶ Constitution ☐
- ▶ Functions ☐

Comptroller and Auditor General of India ☐

- ▶ Comptroller and Auditor-General ☐

Attorney-General of India ☐

- ▶ Appointment ☐
- ▶ Functions and Responsibilities ☐

Other Constitutional Bodies ☐

- ▶ All India Services ☐
- ▶ Union Public Service Commission (UPSC) ☐
- ▶ State Public Service Commission (SPSC) ☐
- ▶ Joint State public Service Commission (JSPSC) ☐

- ▶ National Commission For SCs ☐
- ▶ National Commission For STs ☐
- ▶ Special Officer for Linguistic Minority ☐
- ▶ The Advocate General (Article 165) ☐

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- ▶ Special officer for linguistic Minorities ☐

- ▶ Central Information Commission ☐
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- ▶ Lokpal and Lok Ayukta ☐
- ▶ National Human Rights Commission ☐
- ▶ State Human Right Commission ☐
- ▶ CVC (Central Vigilance Commission) ☐



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1. Political Parties and Election

- ▶ Electoral System in India ☐
- ▶ Electoral Reforms Since 1988 ☐
 - Salient features of the Representation of People Act, 1950 ☐
 - Salient features of Representation of Peoples Act, 1951 ☐
 - Elections in India ☐
 - Electoral reforms since 1988 ☐
 - Criminalization of politics ☐
 - Negative or neutral voting ☐
 - State funding of Election ☐
 - Irregularities in polling ☐
- ▶ Types of Political Parties ☐
- ▶ Party System in India ☐
- ▶ Political Parties in India ☐

- Problems in the working of parties ☐
- Casteism and Politic ☐
- Strengthening of Anti-defection measures ☐

2. Pressure Groups

- ▶ Meaning and Techniques ☐
- ▶ Pressure Groups in India ☐
- ▶ 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 ☐

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1. Governing Institutions in India

- ▶ Structure of Ministries/departments ☐
- ▶ Political head ☐
- ▶ Secretariat organization secretary ☐
- ▶ Functions of the secretariat ☐
- ▶ Functions of attached and subordinate office ☐
- ▶ Other organizations ☐
- ▶ Public sector undertakings ☐
- ▶ The Executive organization ☐
- ▶ Advantages of the separation of secretariat and executive organization. ☐
- ▶ Strengths and weaknesses of the existing structure ☐
- ▶ Recommendations for improving the Organizational structure ☐

2. Audit and other Transparency initiatives

- ▶ CVC ☐
- ▶ CAG ☐

- ▶ Lokpal ☐
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3. Role of SHG, NGOs, Civil Society

- ▶ SHGs ☐
 - Characteristics ☐
 - Role of SHGs in development ☐
- ▶ NGOs ☐
 - Functions ☐
 - Role of NGOs in development ☐
- ▶ Micro Finance Institutions ☐
 - Salient features ☐
 - Role of MFIs in development ☐

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- ▶ The Juvenile Justice (Care and Protection of Children) Act ☐
- ▶ Surrogacy (Regulation) Bill, 2016 ☐
- ▶ Child Labour (Prohibition and Amendment) Bill, 2016 ☐
- ▶ Maternity Benefit Bill, 2016 ☐

- Pre-Conception & Pre-Natal Diagnostic Techniques (PNDT) Act ☐
- Mental Health Care Bill, 2013 ☐
- Protection of Children from Sexual Offences (POCSO) ☐
- Anti Trafficking Bill with Stringent Penalty ☐
- HIV and AIDS (Prevention and Control) Bill- 2014 - Amendments ☐
- Domestic Violence Act, 2005 - SC Widens Ambit ☐
- Rights of Persons with Disabilities Bill, 2014 with more Benefit ☐
- Transgender Persons (Protection of Rights) Bill 2016 ☐
- The Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Amendment Act ☐

5. Welfare Schemes

Health ☐

- National Health Mission ☐
- National Ayush Mission ☐
- Jan Aushadhi Scheme ☐
- Mission Indradhanush ☐
- NFHS-4 survey ☐

Education ☐

- Padhe Bharat Badhe Bharat ☐
- Mid Day Meal Scheme ☐
- GIAN (Global Initiative of Academic Networks) ☐
- SWAYAM (Study Webs of Active – Learning for Young Aspiring Minds) ☐

Start-up and Skill Development ☐

- Start Up India Scheme ☐
- Stand up India Scheme ☐
- National Student Start-up Policy ☐
- National Skill Development Mission ☐
- Pradhan Mantri Kaushal Vikas Yojana ☐
- Deen Dayal Antyodaya Yojana ☐
- Skill Development Initiative Scheme ☐
- Self-Employment & Talent Utilisation (SETU) ☐
- Atal Innovation Mission ☐

Vulnerable Sector ☐

- Social Security ☐

- Atal Pension Yojana ☐
- Pradhan Mantri Jeevan Jyoti Bima Yojana ☐
- Pradhan Mantri Suraksha Bima Yojana ☐
- 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 Samridhi Yojana ☐
- Digital Gudda Guddi Board ☐
- Ujjawala Scheme ☐
- Janani Suraksha Yojana ☐
- Janani Shishu Suraksha Karyakram ☐
- SC/ST ☐
- Vanbandhu Kalyan Yojana ☐
- Pradhan Mantri Adarsh Gram Yojana ☐
- Disability ☐
- Accessible India Campaign (Sugamya Bharat Abhiyan) ☐
- Rural and 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 Sadak Yojana ☐
- Swachh Bharat Abhiyan ☐
- Pradhan Mantri Awas Yojana- 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) ☐

Inclusive growth

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

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- Rural development and poverty alleviation ☐

- Review of the existing Programmes ☐
- Development Administration ☐
- Panchayati Raj ☐
- Agriculture and Rural Development ☐

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- 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 ☐
- Khelo India ☐
- PRAGATI (Pro-Active Governance and Timely Implementation) ☐
- Indian Community Welfare Fund (ICWF) ☐

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- Evolution of India's Foreign Policy ☐
- Post 1990 Scenario ☐
- Global Issues ☐

2. South Asia

- India – Nepal Relations ☐
- India and Bhutan ☐
- India-Afghanistan Relations ☐
- India-Bangladesh Relations ☐
- India-Maldives Relations ☐
- India-Sri Lanka Relations ☐
- India-Myanmar Relations ☐
- India-Pakistan Relations ☐
- SAARC ☐
- NAM (Non-Alignment Movement): Relevance ☐

3. Central Asia

- Mongolia ☐
- Kazakhstan ☐
- Turkmenistan ☐
- Uzbekistan ☐

4. West Asia

- India – UAE Relations ☐
- India IRAN Relations ☐
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- India – Israel Relations ☐
- India – Saudi Arabia ☐

5. Asia – Pacific

- Asia-Pacific Region ☐
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- India-South Africa Relations ☐
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- India-Russia Relations ☐
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- India-USA Relations ☐
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- Seychelles ☐
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10. Indian Diaspora

- ▶ Indian Diaspora in West
- Indian Diaspora in Gulf
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☐☐☐**Remarks**

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1. Macroeconomic Concepts

- ▶ Meaning of Economics ☐
- ▶ Types of Economies ☐

- ▶ Sectors of an Economy ☐
- ▶ Other Sectors of Economy ☐

2. Microeconomic Concepts

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- ▶ National Income ☐
- ▶ Real National Income ☐
- ▶ Calculating National Income ☐
- ▶ Gross Fixed Capital Formation (GFCF) ☐
- ▶ National Organizations Related to National Income Accounts ☐
- ▶ Latest India's National Income Estimates ☐
- ▶ New Series of National Statistics (Base Year 2011-12) ☐
- ▶ Annual Estimates of Expenditures on GDP ☐
- ▶ Per Capita Income ☐
- ▶ Purchasing Power Parity ☐
- ▶ Lorenz Curve ☐
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- ▶ Gini Coefficient ☐

2. Inflation

- ▶ Concepts and Types of Inflation ☐
- ▶ Causes of Inflation ☐
- ▶ Effects of Inflation ☐
- ▶ Measures of Inflation ☐

- WPI, CPI ☐
- Producer Price Index ☐
- GDP Deflator ☐
- Core Inflation ☐
- ▶ Change in Reporting of Inflation ☐
- ▶ Measures to Check Inflation ☐
- Fiscal Measures ☐
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- ▶ Economic Growth ☐
- ▶ Economic Development ☐
- ▶ Measurement of Economic Development ☐
- ▶ Physical Quality of Life Index (PQLI) ☐
- ▶ Millennium Development Goals (MDGs) ☐
- ▶ Different Levels of Economic Development ☐
- ▶ Economy and Environment ☐
- ▶ Environment Taxes ☐
- Carbon Tax ☐
- Green Accounting ☐
- ▶ 12th Five Year Plan and Sustainability ☐

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1. Money Function and Classification

- ▶ Money Concept ☐
- ▶ Measures of Money Supply in India ☐
- ▶ Indian currency system ☐
- ▶ Broad and Narrow Money ☐
- ▶ Money multiplier ☐
- ▶ Digital Money ☐
- ▶ New Monetary Aggregates ☐
- ▶ Monetary Policy ☐

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- ▶ Concept and functions of financial markets ☐
- ▶ Importance of money market ☐
- ▶ Types of capital market ☐
- ▶ Distinguish between capital market and money market ☐
 - Nature and functions of a stock exchange ☐
 - Advantages of stock exchanges ☐
 - Limitations of stock exchanges ☐
 - The stock exchanges in India ☐
- ▶ Insurance Industry - Insurance Industry and Reforms ☐
- ▶ Role of Financial Regulators: SEBI and IRDA ☐

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- ▶ Scheduled Commercial Banks ☐
- ▶ Nationalized Banks ☐
- ▶ Public Sector Banks ☐
 - State Bank of India ☐
- ▶ Private Banks ☐
- ▶ Foreign Banks ☐
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- ▶ Reserve Bank of India (RBI) ☐
- ▶ Methods of Credit Control ☐
- ▶ Cash Reserve Ratio (CRR) ☐
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- ▶ Repo Rate ☐
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- ▶ Call Rates ☐
- ▶ Marginal Standing Facility (MSF) ☐
- ▶ Bank Rate ☐
- ▶ Banking Sector Reforms in India ☐
- ▶ Differentiated Banks ☐
 - Payment Banks ☐
 - Small Banks ☐
- ▶ New banking licence ☐
- ▶ White Label ATM ☐
- ▶ Unified Payments Interface ☐
- ▶ Bank Board Bureau ☐
- ▶ Marginal Cost of Funds Based Lending Rate (MCLR) ☐
- ▶ Priority Sector Lending Certificates ☐
- ▶ Concept of Micro ATM ☐
- ▶ Banking Reforms ☐
- ▶ Basel Norms ☐
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- ▶ Development Financial Institutions ☐
- ▶ Insurance Companies ☐
- ▶ Recent developments in Economic Sector ☐
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 - RBI rule and regulation for peer to peer (P2P) lending ☐
 - Domestic Systemically Important Banks (SIBs) of India ☐
 - Financial Inclusion in India ☐
 - The Concept of Bad Bank ☐
 - Alternative Mechanism Panel for PSB consolidation ☐
 - Employee Provident Fund of India ☐
 - Enforcement Department In RBI ☐
 - Gold Monetization Scheme (GMS) ☐
 - Indian Post Payment Bank (IPPB) ☐
 - Indian Gold Coins/Gold Bullion Scheme ☐

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1. Budgeting

- ▶ Union Budget ☐
- ▶ Plan and Non Plan Expenditure ☐
- ▶ Revenue Receipts ☐
 - Tax Revenue Receipts ☐
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2. Fiscal Policy

- ▶ Fiscal Responsibility and Budget Management (FRBM) Act, 2003 ☐
- ▶ Revenue Deficit, Fiscal Deficit, Primary Deficit ☐
- ▶ Deficit and Surplus Budget ☐

- ▶ Deficit Financing ☐

3. Centre State Distribution

- ▶ Finance Commission (A280)

4. Tax Structure in India

- ▶ Tax – Direct Tax, Indirect Tax ☐
- ▶ Methods of Taxation – Progressive, Regressive, Proportional ☐
- ▶ Value Added Tax – VAT in India ☐
- ▶ Goods and Services Tax – GST, GST Council ☐
- ▶ Service Tax ☐
- ▶ DTC – Direct Tax Code ☐

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1. Meaning Objectives and History

- ▶ Meaning of Economic Planning ☐
- ▶ Objectives of Planning ☐
- ▶ Strategies of Planning ☐
 - Harrod Domar strategy ☐
 - Nehru Mahalonobis strategy ☐
 - Gandhian strategy ☐
 - LPG strategy ☐
- ▶ Regional and National Planning ☐
- ▶ Imperative and Indicative Planning ☐
- ▶ History of Planning in India ☐
- ▶ Visvesvaraya Plan, Gandhian Plan, FICCI Proposal, Congress Plan, Bombay Plan ☐
- ▶ Planning Commission and National Development Council(NDC) ☐

- ▶ Central Planning – 5 Year Plans, 20 Point Program, MPLADS ☐
- ▶ Decentralized Planning ☐

2. Planning Institutions

- ▶ Planning Commission ☐
- ▶ NITI Aayog ☐
- ▶ National Development Council (NDC) ☐

3. Five Year Plans in India

- ▶ 12th Five Year Plan (2012-2017) ☐
- ▶ Alternative Scenarios During 12th Plan ☐
- ▶ Economic Reforms ☐
- ▶ Vision Documents ☐

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1. Foreign Trade Concepts

- ▶ Balance of Payments ☐
- ▶ Foreign Capital – FDI, FPI, FII, QFH ☐
- ▶ Foreign Exchange–Exchange Rate, NEER & REER, ETF ☐
- ▶ FERA & FEMA ☐
- ▶ Capital Account Convertibility in India ☐
- ▶ India's External Debt ☐

- ▶ NRI Deposits ☐
- ▶ Trade Composition ☐

2. Trade Policy and Agreements

- ▶ Import Cover ☐
- ▶ Import/Export Controls ☐
- ▶ Foreign Trade policy 2015-20 ☐
- ▶ Export Promotion ☐

- General Agreement on Tariffs and Trade ☐

3. Exchange Rate

- Exchange Market ☐
- LERMS ☐
- NEER ☐
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4. International Organization

- United Nations ☐
- Food and Agriculture Organization (FAO) ☐
- International Civil Aviation Organization (ICAO) ☐
- International Fund for Agricultural Development (IFAD) ☐
- International Labour Organization (ILO) ☐
- International Maritime Organization (IMO) ☐
- International Monetary Fund (IMF) ☐
- International Telecommunication Union (ITU) ☐
- United Nations Educational, Scientific and Cultural Organization (UNESCO) ☐
- United Nations Industrial Development Organization (UNIDO) ☐
- Universal Postal Union (UPU) ☐
- World Bank Group (WBG) ☐
- International Bank for Reconstruction and Development (IBRD) ☐
- International Finance Corporation (IFC) ☐
- International Development Association (IDA) ☐
- World Health Organization (WHO) ☐
- World Intellectual Property Organization (WIPO) ☐
- World Meteorological Organization (WMO) ☐
- World Tourism Organization (UNWTO) ☐
- World Trade Organization (WTO) ☐
- Asian Development Bank ☐

- Asian Infrastructure Investment Bank (AIIB) ☐
- New Development Bank ☐
- African Development Bank ☐

5. Trade Agreements

- RCEP ☐
- TPP ☐
- NAFTA ☐
- MERCOSUR ☐
- Southern African Development Community (SADC) ☐
- ASEAN ☐
- SAFTA ☐

6. Recent Developments in External Sector

- Global foreign exchange committee ☐
- Price capping of medical devices in India ☐
- Review of the International Investment Agreement (IIA) ☐
- India signed the OECD multilateral convention to prevent BEPS (Base Erosion and Profit Shifting) ☐
- Second Exchange Traded Fund (ETF) Bharat 22 ☐
- Double Tax Avoidance Treaty ☐
- Preferential Trade Agreement with Chile ☐
- Advance Pricing Agreement ☐
- National Committee on Trade Facilitation ☐
- E-tourist Visa ☐
- India's Asylum Policy ☐
- Investor-State Dispute Settlement (ISDS) ☐

ECONOMIC SECTORS

1. Poverty

- Definition and Indices ☐
- Poverty in India ☐
- Human Poverty Index (HPI) ☐
- Expert Groups for Estimating Poverty ☐
- Inequality ☐

2. Employment

- Employment and Unemployment ☐
- Poverty Eradication and Employment Related programs ☐

3. Government Schemes and Programs

- New Social Welfare Schemes ☐
- Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) ☐
- Other Social Protection Programmes ☐
- Rural Infrastructure and Development ☐
- Urban Infrastructure, Housing and Sanitation ☐
- Education Schemes ☐
- Financial Inclusion Schemes ☐
- Health Schemes ☐
- Women Empowerment Programmes ☐
- Other Women Empowerment Programmes ☐
- Social Security ☐

4. Committees

- Ratan P Watal Committee ☐
on Digital Payment ☐
- Committee for Market ☐
Infrastructure Institution (MII) ☐
- D. P. J. Nayak Committee ☐
- Deepak Mohanty Committee Report ☐
on Medium-term Path on Financial Inclusion
- Narasimham Committee Report ☐
on Banking Sector Reforms
- Uday Kotak Committee on Corporate ☐
Governance
- Nachiket Mor Committee ☐



Remarks

SCIENCE & TECHNOLOGY

SCIENCE AND TECHNOLOGY IN INDIA

1. Policy Development of S&T in India

- ▶ Role of S&T in the Developing World ☐
- ▶ S&T Policy in India ☐
 - The S&T Policy Resolution in 1958 ☐
 - S&T Policy of the 1983 ☐
 - S&T Policy of the 2003 ☐
 - S&T Policy 2013 ☐
- ▶ Science and technology as a source of Human Resource Development ☐
- ▶ Awards related to Science ☐
- ▶ New Initiatives Aligned with the National Agenda ☐
- ▶ India and World collaboration in science projects ☐
- ▶ Technology Vision Document 2035 ☐
- ▶ National Biotechnology Development Strategy 2015-2020 ☐
- ▶ National Intellectual Property Rights Policy ☐
- ▶ Organ donation rules in India ☐
- ▶ Policy on Synthetic Biology ☐

2. Different Organization Institution and Various Department for the S&T

- ▶ List of Various Centre Institutions and Bureaus ☐
- ▶ Ministries and Department for science and Technology ☐
- ▶ Institutional structure ☐
 - Department of Science & Technology ☐
 - CSIR ☐
 - Survey of India ☐
 - Science and Engineering Research Council ☐
 - Technology Development Board ☐
 - National Accreditation Board for Testing and Calibration Laboratories ☐

SPACE

1. Space Research Programme, Orbits and Launch

- ▶ Space Technology ☐
- ▶ Indian Space research Programme ☐
- ▶ ISRO and ANTRIX ☐
- ▶ Orbits Type ☐
- ▶ Satellite Launching Systems ☐
- ▶ Terminologies Related to the Space Science ☐

2. Satellites, Launch Vehicles and India Satellite Programmes

- ▶ Earth Observation Systems ☐
- ▶ Satellite Communication in India ☐
- ▶ Remote sensing applications - IRS Systems ☐
- ▶ INSAT Satellite Application ☐
- ▶ GSAT Satellite Application ☐
- ▶ Launch vehicle Technology ☐
- ▶ GSLV and Various Engine ☐

- | | | | |
|--|--------------------------|--|--------------------------|
| ▶ Recent National and International Space Missions | <input type="checkbox"/> | ▶ OSIRIS-Rex passed by earth to reach asteroid Benu | <input type="checkbox"/> |
| ▶ Cryogenic rockets | <input type="checkbox"/> | ▶ Hackathon # Open Gov Data Hack | <input type="checkbox"/> |
| ◦ Global Positioning System | <input type="checkbox"/> | ▶ Google Lunar X Prize Competition | <input type="checkbox"/> |
| ◦ Galileo | <input type="checkbox"/> | ▶ NASA-ISRO synthetic aperture radar satellite (NISAR) | <input type="checkbox"/> |
| ◦ GLONASS | <input type="checkbox"/> | ▶ GSAT-17 heaviest communication satellite of ISRO | <input type="checkbox"/> |
| ◦ IRNSS | <input type="checkbox"/> | ▶ Astrosat, Chandra and Hubble Jointly detect massive cosmic explosion | <input type="checkbox"/> |
| ◦ GAGAN | <input type="checkbox"/> | ▶ Scientists create first global map of water on moon | <input type="checkbox"/> |
| ▶ Chandrayaan – I & II | <input type="checkbox"/> | ▶ World's largest aircraft "Strato launch" | <input type="checkbox"/> |
| ▶ Mars Orbiter Mission | <input type="checkbox"/> | ▶ MOM complete 3 years in orbit | <input type="checkbox"/> |
| ◦ Space Organisations | <input type="checkbox"/> | ▶ Solar mission Aditya L-1 in 2019 | <input type="checkbox"/> |
| ◦ Space race/Space junk | <input type="checkbox"/> | ▶ Gravitational waves news | <input type="checkbox"/> |
| ▶ Recent updates | <input type="checkbox"/> | ▶ Radio galaxies | <input type="checkbox"/> |
| ◦ South Asia Satellite: Significance | <input type="checkbox"/> | ▶ Indigenously developed S-Band Doppler weather radar | <input type="checkbox"/> |
| ◦ Neutrino Observatory | <input type="checkbox"/> | ▶ Kelvin waves | <input type="checkbox"/> |
| ◦ Solar Mission- ADITYA | <input type="checkbox"/> | ▶ ISRO made satellite based chip system | <input type="checkbox"/> |
| ◦ Gravitational Waves | <input type="checkbox"/> | ▶ TDRS-M NASA | <input type="checkbox"/> |
| RECENT DEVELOPMENTS | <input type="checkbox"/> | ▶ Neutrino Observatory | <input type="checkbox"/> |
| ▶ Spitzer Space Telescope | <input type="checkbox"/> | ▶ Indian Space Vision-2025 | <input type="checkbox"/> |
| ▶ Chandra X-Ray Observatory | <input type="checkbox"/> | ◦ 'NIRBHAY' sub sonic cruise missile | <input type="checkbox"/> |
| ▶ Multi Application Solar Telescope | <input type="checkbox"/> | ◦ Brahmos | <input type="checkbox"/> |
| ▶ Thirty Metre Telescope | <input type="checkbox"/> | ◦ INS Koltar | <input type="checkbox"/> |
| ▶ Resourcesat-2A | <input type="checkbox"/> | ◦ INS Kiltan | <input type="checkbox"/> |
| ▶ Astrosat | <input type="checkbox"/> | ◦ NAG missile | <input type="checkbox"/> |
| ▶ Sunspot | <input type="checkbox"/> | ◦ Hydrogen bomb | <input type="checkbox"/> |
| ▶ Magnetars | <input type="checkbox"/> | ◦ Vikram OPV | <input type="checkbox"/> |
| ▶ Neutron stars | <input type="checkbox"/> | ◦ Integrated Quarter Master Package | <input type="checkbox"/> |
| ▶ Air-breathing propulsion system | <input type="checkbox"/> | ◦ INS Kalvari | <input type="checkbox"/> |
| ▶ Space Junk | <input type="checkbox"/> | ◦ Prithvi II | <input type="checkbox"/> |
| ▶ Graveyard Orbit | <input type="checkbox"/> | ◦ Air Independent Propulsion | <input type="checkbox"/> |
| ▶ Super cluster of galaxies known as "Saraswati". | <input type="checkbox"/> | ◦ Rukmini | <input type="checkbox"/> |
| ▶ NASA: Asteroid impact and deflection assessment mission. | <input type="checkbox"/> | | |
| ▶ Commercial use of Lithium-Ion battery technology | <input type="checkbox"/> | | |
| ▶ Hyperspectral imaging satellite | <input type="checkbox"/> | | |
| ▶ Water propulsion system in CUBESAT | <input type="checkbox"/> | | |
| ▶ Saturn-cassini Mission | <input type="checkbox"/> | | |

IT AND COMMUNICATION

1. Different Regulatory Bodies in India for ICT

- | | | | |
|--|--------------------------|---|--------------------------|
| ▶ Ministry of Communication and information Technology | <input type="checkbox"/> | ▶ Initiatives in 12 th 5 year plan | <input type="checkbox"/> |
| | | ▶ Major Policy Initiatives | <input type="checkbox"/> |
| | | ▶ National Optical Fibre network | <input type="checkbox"/> |

- Spectrum Management ☐
- Government initiatives ☐
- Cyber Law ☐

2. Computer Terminology and Fundamental

- History of Computers ☐
- Types of Computer ☐
- Component of Computer system ☐
- Computer Languages ☐
- Generation of computers ☐
 - Computer terminologies ☐
 - Supercomputer and its applications ☐
- Display technologies ☐
- Cathode ray ☐
- LCD ☐
- LED ☐
- Plasma Monitors ☐
- OLED ☐

3. Mobile Generations and Technology

- Definition and Impact of ICT on Society ☐
- Evolution of Telecommunication
- Media Transmission technology
- Wireless , Optical Fibres, VSAT ☐
 - SIM IMEI 3G 4 G VoLTE Wi Max
- Mobile generations ☐
 - Smartphone ☐
 - Important concepts ☐

4. Internet, Types of Network and e- Governance

- Internet ☐
- WWW ☐
- IP ☐
- URL ☐
- HTTP ☐
- Computer Security Tools: firewalls, hackers ☐
- Global Internet Governance e ☐
- Internet of things ☐
- Internet Protocol ☐
- VPN ☐

- Networking : Bluetooth , WiFiHotSpot ☐
- National E Governance Plan ☐
- **Recent Developments** ☐
 - Government initiatives ☐
 - Digital India Initiative ☐
 - MeghRaj ☐
 - Code Free for India ☐
 - E-Kranti ☐
 - Bharat Net project ☐
 - Bharat QR ☐
 - Contemporary debates ☐
 - Net Nuetrality ☐
 - Internet of Things ☐
 - Big Data Initiative and Privacy ☐
 - Cyber crime and security ☐

5. Spectrum Policy, Broad Band Policy

- Spectrum Policy in India ☐
- Spectrum ☐
- Mobile Spectrum ☐
- Broadband Policy in India ☐
- Cloud Computing ☐
- Big Data ☐
- Encyption ☐
- Biometrics ☐
- Virtual Reality ☐
- Digital India ☐
- QR Codes ☐

Recent Developments in IT & Telecom

- Quantum computing ☐
- Project brainwave ☐
- Sagar Vani System ☐
- Locky Ransomware, Petya, WannaCry ☐
- Hindi word for computer i.e., "SANGANAK" ☐
- India's first technology and innovation support centre (TISC) ☐
- Net neutrality ☐
- National cyber coordination center ☐
- Hortinet ☐
- Digital Transaction Methodologies ☐
- Block chain Technology ☐
- Bitcoins ☐

- | | | | |
|-------------------------------------|--------------------------|--|--------------------------|
| ▶ Cyber Swachhta Kendra | <input type="checkbox"/> | ▶ Wi-Fi Technology | <input type="checkbox"/> |
| ▶ Digital Transaction Methodologies | <input type="checkbox"/> | ▶ Digital Terrestrial Television Transmission System | <input type="checkbox"/> |
| ▶ Bharat Net Project | <input type="checkbox"/> | ▶ Internet of Things | <input type="checkbox"/> |

MATERIALS, NANO TECHNOLOGY AND ROBOTICS

1. Superconductivity Laser, Artificial Intelligence

- ▶ History Classification and Properties of Superconductors ☐
- ▶ Application of Superconductors ☐
- ▶ Types and Applications of LASERS ☐
- ▶ Artificial Intelligence and Application ☐
- ▶ Advantages and Disadvantages of Artificial Intelligence ☐

2. Superconductivity Laser, Artificial Intelligence

- ▶ What is Robotics? ☐
- ▶ Robotics Terminologies ☐
- ▶ Laws of Robotics ☐
- ▶ Robotics in India ☐
- ▶ Machine vs Computer vs Robots ☐
- ▶ Parts of a Robot ☐
 - Controller ☐
 - Manipulator ☐
 - End Effector ☐
 - Sensor ☐
- ▶ Classification of Robots ☐
 - Rolling Robots ☐
 - Walking Robots ☐
 - Autonomous Robots ☐
- ▶ Artificial Intelligence ☐
- ▶ Advantages and Disadvantages of Robot ☐
- ▶ Applications of Robotics ☐
 - Industrial Sector ☐
 - Aerospace ☐
 - Healthcare Delivery ☐

- Outer Space ☐
- Exploration ☐
- Military Robots ☐
- Disaster Areas ☐
- Entertainment ☐
- Agriculture ☐
- Domestic work ☐

3. Nano Technology

- ▶ What is Nanoscience and Nanotechnology? ☐
- ▶ Origination of Nanoscience and Technology ☐
- ▶ Basics of Nanoscience ☐
- ▶ Nanomaterials ☐
- ▶ Applications of nanotechnology ☐
 - Nano medicine ☐
 - Semiconductors and computing ☐
 - Food ☐
 - Textiles ☐
 - Sustainable energy ☐
 - Environment ☐
 - Transport ☐
 - Space ☐
 - Carbon Nanotube ☐
 - Graphene ☐
 - Quantum Dots ☐
 - Nano Bots ☐
 - Agriculture ☐
- ▶ Adverse Health and Environmental Impacts of Nanotechnology ☐
- ▶ Social and Ethical Impacts: ☐
- ▶ Nano-science and Nano-technology in India ☐

DEFENCE

1. Defence Technology

- | | | | |
|-------------------------------------|--------------------------|----------------------------------|--------------------------|
| ▶ Organisations | <input type="checkbox"/> | ◦ On the basis of type | <input type="checkbox"/> |
| ▶ Missile system and classification | <input type="checkbox"/> | ◦ On the basis of launch vehicle | <input type="checkbox"/> |
| | | ◦ On the basis of Range | <input type="checkbox"/> |

- On the basis of propulsion system ☐
- ▶ Ballistic vs Cruise Missile ☐
- ▶ IGMDP Intergrated Guided Missile Development Programme ☐
- PrithviTrishul Nag Akash AGNI ☐
- Shaurya Missile ☐
- ASTRA Missile ☐
- Dhanush ☐
- Prahaar ☐
- ▶ Brahmos Missile System ☐
- ▶ Anti-Ballistic Missile System ☐
- ▶ Frigates Destroyers and Aircraft Carriers ☐
- ▶ AWACS ☐

- ▶ Light Combat Aircraft ☐
- Unmanned Aerial Vehicle ☐
- Stealth technology ☐
- Chemical Weapon ☐
- Biological Weapon ☐

2. Submarines

- ▶ Indian Submarines and Naval Ships ☐
- ▶ Commissioned Submarines ☐
- ▶ Project 75 ☐
- ▶ INS Astradharini ☐

NUCLEAR TECHNOLOGY

1. Nuclear Energy and Nuclear Fuels

- ▶ Types of nuclear reactions ☐
- Nuclear Fusion ☐
- Nuclear Fission ☐
- ▶ Nuclear Fuel – Stage 1 Stage 2 Stage 3 ☐

2. Nuclear Programme in India

- ▶ N-Power Policy of India ☐
- Advantages of Nuclear Energy ☐
- Disadvantages of Nuclear Energy ☐
- ▶ Institutions involved in Nuclear energy Development, AERB ☐
- ▶ Safety standards in Nuclear Power plants ☐
- ▶ India's 3 stage Civil Nuclear Programme ☐

- ▶ Nuclear Reactors in India ☐
- ▶ Kudankulam Project ☐
- ▶ Jaitapur Plant ☐

3. Organisation Institutions

- ▶ Department of Atomic Energy ☐
- ▶ BHABHA ☐

4. Radioactivity

- ▶ Radiation and Radioactivity ☐
- ▶ Radiation Technologies and Applications ☐
- ▶ Radioactive Waste and Nuclear Waster Management ☐
- ▶ Nuclear & Radiological Disasters ☐

IPR AND OTHER MISCELLANEOUS ISSUES

1. IPR Intellectual Property Rights

- ▶ Copyrights ☐
- ▶ Trademarks ☐
- ▶ Patents ☐

- ▶ Industrial Design ☐
- ▶ Trades Secrets ☐
- ▶ IPR and Agriculture ☐

BIOTECHNOLOGY

1. Biotechnology in India

- ▶ Department of BT ☐

- ▶ Various Fields of BT ☐
- ▶ R&D ☐

2. Genetics and biotechnology

- ▶ Industrial genetics ☐
- ▶ Genetic engineering ☐
- ▶ DNA sequencing ☐
- ▶ Nucleic acid probes ☐
- ▶ Genomics and proteomics ☐
- ▶ Bioprocess/fermentation technology ☐

3. Biological fuel generation

- ▶ Global warming and the significance of fossils fuels ☐
- ▶ Biofuels from biomass ☐
- ▶ Bioethanol from biomass ☐
- ▶ Biodiesel ☐
- ▶ Methane ☐
- ▶ Hydrogen ☐

4. Environmental biotechnology

- ▶ Microbial Ecology Environmental Biotechnology ☐
- ▶ Waste water and sewage treatment ☐
- ▶ Landfilling technologies ☐
- ▶ Composting ☐
- ▶ Bioremediation ☐
- ▶ Detect and monitoring of pollutants ☐
- ▶ Microbes and the geological environment ☐

5. Plant and Forest biotechnology

- ▶ Plant biotechnology ☐
- ▶ Forest biotechnology ☐

6. Animal and insect biotechnology

- ▶ Genetic manipulation and transgenic animals ☐
- ▶ Genetically engineered hormone and vaccines ☐
- ▶ Animal organs for human patients ☐
- ▶ Genetically modified insects ☐

7. Food and beverage biotechnology

- ▶ Food and beverage fermentations ☐
 - Microorganisms as food, Enzymes and food processing ☐
 - Amino acids, vitamins and sweeteners ☐
 - Organic acids and polysaccharides ☐

- Public acceptance and safety of new biotechnology foods ☐

- ▶ Biotechnology and medicine ☐
 - Pharmaceuticals and biopharmaceuticals ☐
 - Antibiotics ☐
 - Vaccines and monoclonal antibodies ☐
 - Biopharmaceuticals/therapeutic proteins ☐
 - Pharmacogenetics ☐
 - Molecular biology and human disease ☐
 - Diagnostics in developing countries ☐
 - Gene therapy ☐
 - Systems biology and medicine ☐
- ▶ Stem cell biotechnology ☐

8. Protection of biotechnological inventions

- ▶ Patent protection Trade secrets ☐
- ▶ Plant breeders' rights ☐

9. Recent development in Biotechnology

- ▶ Achievements of Biotechnology in different fields ☐
- ▶ Genome sequencing of Ragi done for the first time in the world ☐
- ▶ GM mustard policy ☐
- ▶ DNA as storage device ☐
- ▶ Biomarker ☐
- ▶ Algae based footwear ☐
- ▶ Artificial Womb ☐
- ▶ U.K. grants gene editing license ☐
- ▶ GM Mosquito ☐
- ▶ DBT launched "Sohum" an innovative newborn hearing screening device ☐
- ▶ Biotech-KISAN scheme ☐
- ▶ India's first biomass to ethanol plant & its commercialization ☐
- ▶ Digital Biopiracy ☐
- ▶ Genetically Modified Mosquito ☐
- ▶ Designer Babies' or Three Parents Babies ☐
- ▶ National Biotechnology Development Strategy 2015-2020 ☐



Remarks

GENERAL SCIENCE

BIOLOGY

1. Origin of Life and Cells

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

2. Genetics

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

3. Classification of Living Things

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

4. Evolution of Life

- ▶ Evolution of Life ☐

- ▶ Animal Evolution ☐
- ▶ Human Evolution ☐

5. Tissues

- ▶ Epithelial tissue ☐
- ▶ Connective tissue ☐
- ▶ Muscle tissue ☐

6. Endocrine system

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

7. Respiratory System

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

8. The Transport System in Organisms

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

9. Skeletal and Muscular Systems

- ▶ Bone and Skeleton System (Osteology) ☐
- ▶ Ligaments (Syndesmology) ☐
- ▶ Muscular System (Myology) ☐
- ▶ Vertebrates ☐

10. Reproductive System

- ▶ Asexual Reproduction in Plants ☐
- ▶ Asexual Reproduction in Animals ☐
- ▶ Sexual Reproduction in Plants ☐
- ▶ Sexual Reproduction in Animals ☐
- ▶ Sexual Reproduction in Humans ☐

11. Excretory System

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

12. Nutrition

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

13. Diseases

- ▶ Tuberculosis ☐

- ▶ Non-Communicable diseases ☐
- Diabetes mellitus ☐

14. Economic Zoology

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

15. Recent Development

- ▶ India has declared free from Bird flu ☐
- ▶ Revised Draft guidelines for stem ☐
cell research, 2017
- ▶ Therapy for sepsis ☐
- ▶ Curcumin, A bioactive component ☐
of turmeric treats cancer
- ▶ Embryo transfer technology ☐
to increase livestock productivity
- ▶ "SOHUM" an indigenously developed ☐
newborn hearing screening device
- ▶ Kyasanur forest disease or monkey ☐
fever developed
- ▶ India Declared Maternal and Neonatal ☐
Tetanus, H5N1 and Yaws Free
- ▶ Mission Indradhanush ☐
- ▶ New TB Drug Regimen ☐



Remarks