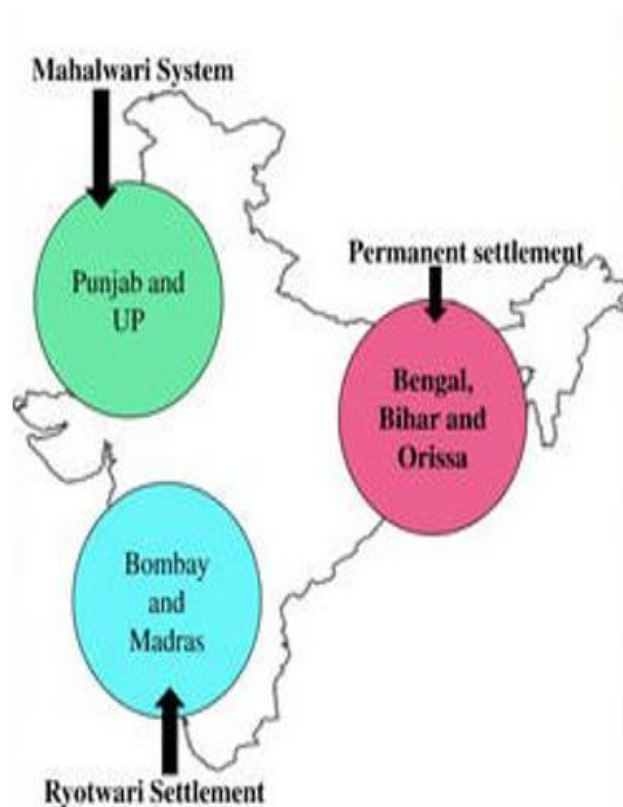


ALL INDIA MOCK TEST TEST – 1 KEY WITH EXPLANATION

1.C

2.A



LAND REVENUE SYSTEMS IN BRITISH INDIA			
ZAMINDARI, RYOTWARI, AND MAHALWARI WERE THE MAJOR SYSTEMS OF LAND REVENUE COLLECTION THAT EXISTED IN INDIA.			
	ZAMINDARI SYSTEM	RYOTWANI SYSTEM	MAMALWARI SYSTEM
INTRODUCED BY	Lord Cornwallis in 1793	Sir Thomas Munro in 1820	William Bentick in 1833
INTRODUCED IN	Bengal, Bihar, Orissa and Banaras	Madras, Bombay, Eastern Bengal, Assam, and Coorg	North-West province, parts of Central India, Punjab and Ganga Valley of British India
OWNER OF THE LAND	Zamindars were recognized as the owner of the land	Ryots (or Raiyyats) were recognized as owners of the land	-
RIGHTS TO COLLECT THE RENT	Zamindars were given the right to collect the rent from the peasants	British Government collected taxes directly from the peasants	The village committee was held responsible for the collection of the taxes

3.C

- 50% shall be held by the central government, 15% by the concerned state government and 35% by the sponsor bank.
- The Master Directions on Priority Sector Lending (PSL) issued by RBI prescribe an enhanced target of 75% for RRBs for lending to the priority sector, as against the target of 40% applicable to Commercial Banks.



4. D

Scheduled Bank

- They are listed in the second schedule of the RBI Act.
- These have a paid up capital of Rs. 5 lakhs or more and comply with all the requirements of the RBI.
- They maintain a cash reserve ratio with RBI.
- They are authorized to borrow funds from the Reserve Bank of India.
- They are comparatively more financially stable.

Non-Scheduled Bank

- They are not listed in the second schedule of the RBI Act.
- There is no such condition that needs to be fulfilled for it to be considered a non-scheduled bank.
- They maintain the CRR amount with themselves.
- They are not allowed to.
- These banks are riskier.

5.B

- The Reserve Bank of India (RBI) has named the top three lenders in India – State Bank of India (SBI), ICICI Bank, and HDFC Bank – as Domestic Systemically Important Banks (D-SIBs), or banks that are too big to fail.
- In addition to the usual capital conservation buffer, D-SIBs in India are required to maintain additional Common Equity Tier 1 (CET1) capital. According to the RBI's latest press release, SBI must maintain an additional 0.60% CET1 as a percentage of its risk-weighted assets, while ICICI Bank and HDFC Bank must maintain an additional 0.20% each.
- In order to be listed as a D-SIB, a bank needs to have assets that exceed 2 percent of the national GDP. The banks are then further classified on the level of their importance across the five buckets.

6. D

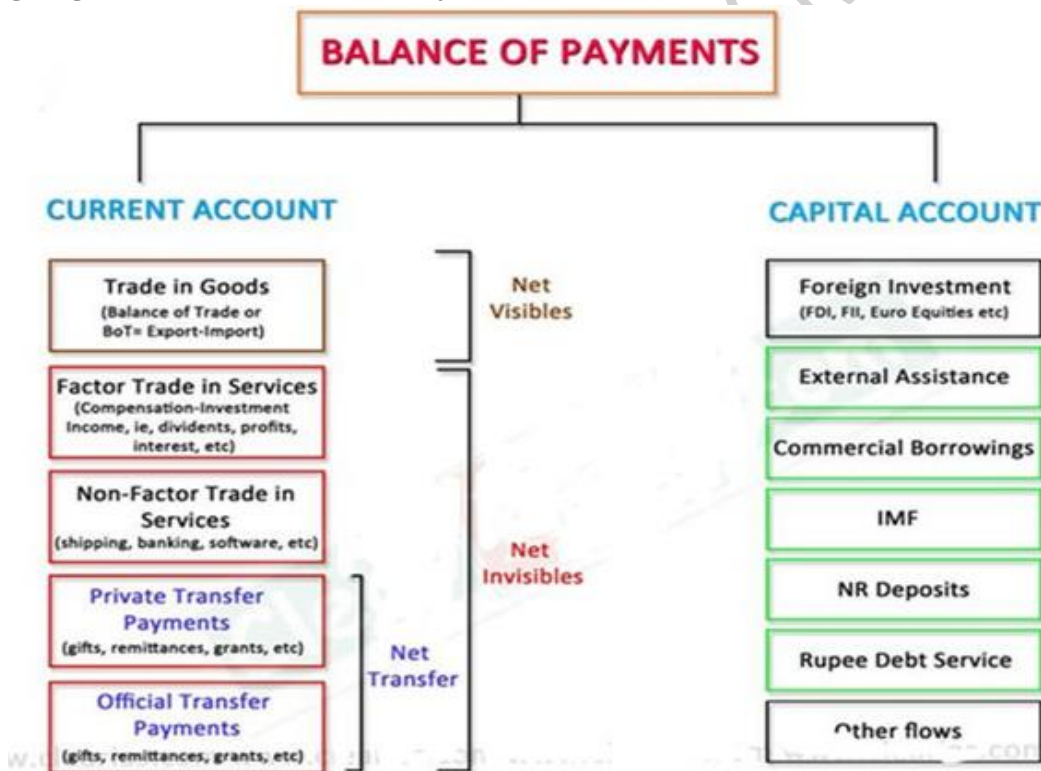
7. C

1. Revenue Deficit – Revenue Expenditure – Revenue Receipts
2. Budgetary Deficit – Total Expenditure – Total Receipts (excluding net sale of treasury bills)
3. Monetized Deficit (Deficit Financing) – Increase in net RBI credit to the Government.
4. Fiscal Deficit – Total Expenditure – (Revenue Receipts + Recovery of Loans + Receipts from the sale of assets by the public sector enterprises)
5. Primary Deficit – Fiscal Deficits – Interest Payments

8.A

9. A

The balance of payments (BoP) records all economic transactions in goods, services, and assets of the country with the rest of the world for a specified time period, usually a year. In simple terms, it is a systematic accounting balance sheet of the country and includes both debit and credit transactions. BoP is used to monitor all international monetary transactions. All trades conducted by both the private and public sectors are accounted for in the BoP in order to determine how much money is going in and out of the country.



10. C

Types of Cut Motion:

1. Disapproval of policy cut: A disapproval of policy cut demand seeks the amount of the demand be reduced to Re 1, representing the disapproval of the policy undermining the demand. However, if a member moves the cut, they have to indicate in precise terms the details of the policy which they want to discuss and should be confined to the specific points mentioned in the cut notice.

2. Economic cut: The economic cut motion calls for a reduction in the allocation of the demand to a specific amount. It represents the economy that can be affected. Such a specified amount may either be a lump-sum reduction in the demand or omission or reduction of an item in the demand. The notice has to indicate briefly and precisely the particular matter on which a discussion is sought to be raised.

3. Token cut: A token cut motion is moved so that the amount of the demand is reduced by Rs 100. This is to ventilate a specific grievance that is within the sphere of the responsibility of the Government of India.

11. A

- The “Foreign Contribution (Regulation) Act” (FCRA) regulates foreign donations and ensures that such contributions do not adversely affect internal security.
- The FCRA act is implemented by the **Ministry of Home Affairs**.
- Under the new rules notified by MHA in 2015, NGOs are required to give an undertaking that the **acceptance of foreign funds is not likely to prejudicially affect the sovereignty and integrity of India** or impact friendly relations with any foreign state and does not disrupt communal harmony.
- **Provisions of the Act:**
- The **FCRA requires every person or NGO** wishing to receive foreign donations to be registered under the Act.
- To **open a bank account** for the receipt of foreign funds in **State Bank of India**, Delhi is mandatory.
- These funds can be **utilised only for the purpose** for which they have been received, and as stipulated in the Act.
- The receivers of foreign funds are also required **to file annual returns**, and they must not transfer the **funds to another NGO**.

Contributions made by a citizen of India living in another country (i.e., Non-Resident Indian), from his personal savings, through the normal banking channels, is not treated as foreign contribution. However, while accepting any donations from such NRI, it is advisable to obtain his passport details to ascertain that he/she is actually an Indian citizen.

Foreign source, as defined in Section 2(1) (j) of FCRA, 2010 includes:- (i) the Government of any foreign country or territory and any agency of such Government; (ii) any international agency, not being the United Nations or any of its specialized agencies, the World Bank, International Monetary Fund or such other agency as the Central Government may, by notification, specify in this behalf; (iii) a foreign company; (iv) a corporation, not being a foreign company, incorporated in a foreign country or territory; (v) a multi-national corporation referred to in sub-clause (iv) of clause (g); (vi) a company within the meaning of the Companies Act, 1956, and more than one-half of the nominal value of its share capital is held, either singly or in the aggregate, by one or more of the following, namely:- (A) the Government of a foreign country or territory; (B) the citizens of a foreign country or territory; (C) corporations incorporated in a foreign country or territory; (D) trusts, societies or other associations of individuals (whether incorporated or not), formed or registered in a foreign country or territory; (E) Foreign company; (vii) a trade union in any foreign country or territory, whether or not registered in such foreign country or territory; (viii) a foreign trust or a foreign foundation, by whatever name called, or such trust or foundation mainly financed by a foreign country or territory; (ix) a society, club or

other association or individuals formed or registered outside India; (x) a citizen of a foreign country

12. A

Calculation of GDP by expenditure approach is,

$$\text{GDP} = C + I + G + (X - M)$$

Where

GDP = Gross domestic product

C = Personal consumption expenditure

I = Private investment

G = Government spending

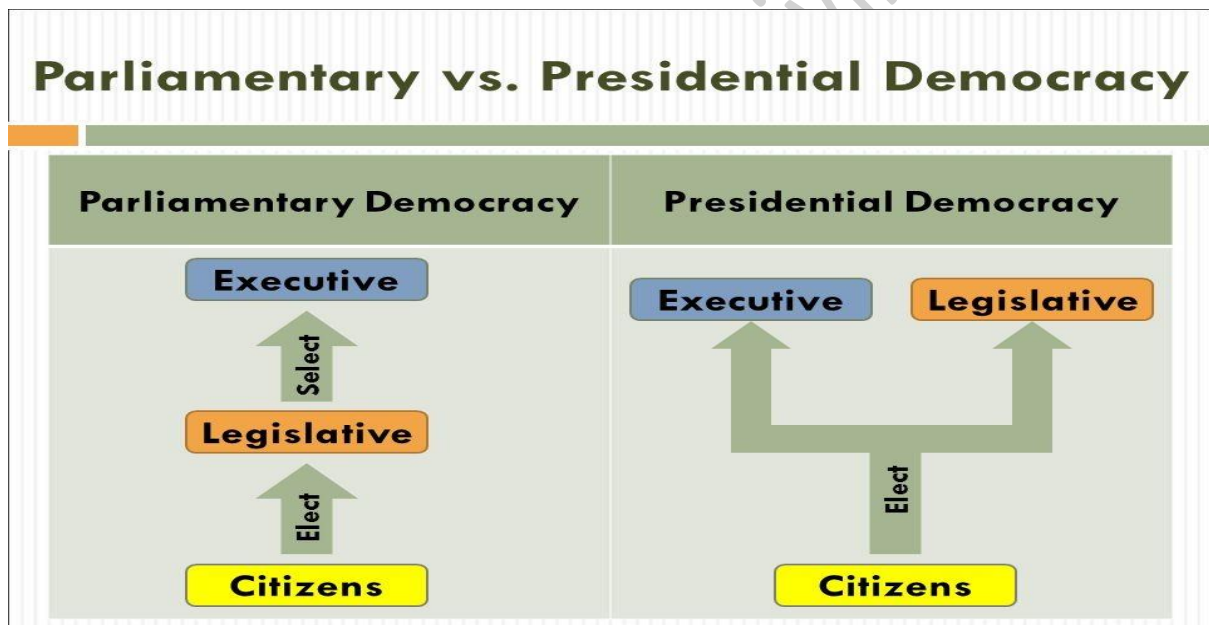
X = Net exports

M = Imports

Income approach calculation

$$\text{GDP} = \text{Private consumption} + \text{Gross investment} + \text{Government investment} + \text{Government spending} + (\text{Exports} - \text{Imports})$$

13. D



14. A

- According to Article 352, the president may declare an emergency if he or she determines that there is a serious situation in which war, foreign aggression, or armed rebellion pose a threat to the nation's security. The entire country of India, or any section of it, may be proclaimed to be in a state of emergency.
- If the president determines that there is an imminent threat of war, external attack, or armed insurrection, he may declare a national emergency.
- The President may issue a proclamation for the entire nation or a specific region (This provision was inserted by the 42nd Constitutional Amendment Act, 1976). The proclamation will initially be in effect for one month. During this time, the cabinet must obtain parliamentary approval.

15. A

- Only with the written consent of the cabinet may the president issue an emergency proclamation. The term “External Emergency” refers to a national emergency that is declared due to “war” or “external attack.” Internal emergency is the term used when a national emergency is declared due to “armed revolt.”
- This emergency can be imposed by the President after receiving a written recommendation from the cabinet. This provision was introduced through the 44th amendment act

16. C

Power Coordination

- The primary premise behind this system is that two entities, such as the legislative and executive branches, share authority. Under this setup, both organs (legislature and executive) are dependent on one another.
- They interfere with other’s business in a variety of constitutional ways. Ministers, for example, propose the bulk of legislative initiatives; they can engage in legislation, address the legislature, summon sessions, and even dissolve the lower house, among other things.
- Parliament, on the other hand, has the ability to call cabinet members’ activities into question, to propose various resolutions, and to depose the government through a vote of no confidence. Both government institutions have several checks and balances on one another.

17. D

It was the **Kesavananda Bharati case** that brought this doctrine into the limelight. It held that the “basic structure of the Indian Constitution could not be abrogated even by a constitutional amendment”. The judgement listed some basic structures of the constitution as:

1. Supremacy of the Constitution
2. Unity and sovereignty of India
3. Democratic and republican form of government
4. Federal character of the Constitution
5. Secular character of the Constitution
6. Separation of power
7. **Individual freedom**

Over time, many other features have also been added to this list of basic structural features. Some of them are:

- Rule of law
- **Judicial review**
- Parliamentary system
- Rule of equality
- Harmony and balance between the Fundamental Rights and DPSP
- Free and fair elections
- **Limited power of the parliament to amend the Constitution**
- **Power of the Supreme Court of India under Articles 32, 136, 142 and 147**
- **Power of the High Court under Articles 226 and 227**
- Any law or amendment that violates these principles can be struck down by the SC on the grounds that they distort the basic structure of the Constitution.

18. C

- Fundamental rights are the basic human rights enshrined in the Constitution of India which are guaranteed to all citizens.
- They are applied without discrimination on the basis of race, religion, gender, etc. Significantly, fundamental rights are enforceable by the courts, subject to certain conditions.

19. C

Article 13 in The Constitution Of India 1949

Laws inconsistent with or in derogation of the fundamental rights

- All laws in force in the territory of India immediately before the commencement of this Constitution, in so far as they are inconsistent with the provisions of this Part, shall, to the extent of such inconsistency, be void
- The State shall not make any law which takes away or abridges the rights conferred by this Part and any law made in contravention of this clause shall, to the extent of the contravention, be void
- In this article, unless the context otherwise requires law includes any Ordinance, order, bye law, rule, regulation, notification, custom or usages having in the territory of India the force of law; laws in force includes laws passed or made by Legislature or other competent authority in the territory of India before the commencement of this Constitution and not previously repealed, notwithstanding that any such law or any part thereof may not be then in operation either at all or in particular areas
- Nothing in this article shall apply to any amendment of this Constitution made under Article 368

20. A

AMENDMENT OF THE CONSTITUTION 368

- [Notwithstanding anything in this Constitution, Parliament may in exercise of its constituent power amend by way of addition, variation or repeal any provision of this Constitution in accordance with the procedure laid down in this article.] 3
- [An amendment of this Constitution may be initiated **only by the introduction of a Bill for the purpose in either House of Parliament,** and when the Bill is passed in each House by a majority of the total membership of that House and by a majority of not less than two-thirds of the members of that House present and voting,
- [it shall be presented to the President who shall give his assent to the Bill and thereupon]
- the Constitution shall stand amended in accordance with the terms of the Bill:
- Provided that if such amendment seeks to make any change in— (a) article 54, article 55, article 73, article 162 or article 241, or (b) Chapter IV of Part V, Chapter V of Part VI, or Chapter I of Part XI, or (c) any of the Lists in the Seventh Schedule, or (d) the representation of States in Parliament, or (e) the provisions of this article,
- **the amendment shall also require to be ratified by the Legislatures of not less than one-half of the States** by resolutions to that effect passed by those Legislatures

21. A

22. C

There are six fundamental rights of Indian Constitution along with the constitutional articles related to them are mentioned below:

Right to Equality (Article 14-18)

Right to Freedom (Article 19-22)

Right against Exploitation (Article 23-24)

Right to Freedom of Religion (Article 25-28)

Cultural and Educational Rights (Article 29-30)

Right to Constitutional Remedies (Article 32)

DPSP:

Article 38: The State shall strive to promote the welfare of the people by securing and protecting a social order by **ensuring social, economic and political justice** and by **minimising inequalities** in income, status, facilities and opportunities

23. C

- Ordinances are like a law but not enacted by the Parliament but rather promulgated by President of India when Lok Sabha and Rajya Sabha or either of those is not in session. Union Cabinet's recommendation is a must for an ordinance to be promulgated. Using ordinances, immediate legislative actions can be taken.
- **Note:** For an ordinance to exist, it should be approved by the Parliament within six weeks of it being introduced. Parliament is required to sit within 6 weeks from when Ordinance was introduced.

Article 123 deals with the ordinance making power of the President. President has many legislative powers and this power is one of them.

38th Amendment Act inserted a new clause (4) in Article 123 stating that the President's satisfaction while promulgating an Ordinance was final and could not be questioned in any court on any ground. However, the 44th Amendment to Indian Constitution reversed it and made the President's satisfaction to bring ordinance justiciable.

1. Ordinances can be introduced only on those subjects on which the Indian Parliament can make laws.
2. Ordinances cannot take away any rights of citizens that are guaranteed by the Fundamental Rights of the Indian Constitution.
3. Ordinance ceases to exist if parliament takes no action within six weeks from its reassembly
4. Ordinance also stands void if both the houses pass a resolution disapproving the ordinance

24. B

- **RC Cooper Case 1970:** Supreme Court in RC Cooper vs. Union of India (1970) held that the **President's decision to promulgate ordinance could be challenged** on the grounds that 'immediate action' was not required, and the ordinance had been issued primarily to bypass debate and discussion in the legislature.
- **DC Wadhwa Case 1987:** The issue of frequent promulgation of ordinances was again brought up in the Supreme Court through a writ petition.
- The petition was regarding the promulgation of 256 ordinances between 1967 and 1981 in Bihar.

- This included 11 ordinances that were kept alive for more than 10 years and famously dubbed as ordinance raj.
- The Supreme court held that the legislative power of the executive to promulgate ordinances is to be **used in exceptional circumstances** and not as a substitute for the law-making power of the legislature.
- **Krishna Kumar Singh Case 2017:** Supreme Court in Krishna Kumar Singh v. the State of Bihar held that the authority to issue ordinances is not an absolute entrustment, but is “conditional upon satisfaction that circumstances exist rendering it necessary to take immediate action”.
- It further stated that the re-promulgation of ordinances is a fraud on the Constitution and a subversion of democratic legislative processes.

25. A

- **Article 111 of the Constitution** specifies that the **President can either sign off on the Bill or withhold his consent.**
- **A Bill is sent to Parliament for reconsideration** if the President withholds his assent on it. And if Parliament sends it back to the President, he has no choice but to approve it. Thus, the **President enjoys only a 'suspensive veto'.**

26. D

- Article 75 of the Indian Constitution mentions that a Prime Minister is one who is appointed by the President. There is no specific procedure for his election or appointment. Article 74(1) states that there shall be a Council of Ministers with a Prime Minister at the head to aid and advise the President. Thus, the Indian Constitution itself recognizes a Council of Ministers.

74	Mentions how the Prime Minister and President are both connected with the council of ministers. The Council with PM as head advise President on various issues.
75	Mentions three things: <ul style="list-style-type: none"> • President appoints PM and other ministers are appointed by the President on the advice of the PM. • Ministers hold their office during the pleasure of the President • Council of Ministers is collectively responsible to the Lok Sabha
78	PM communicates all decisions made by the council of members to the President. President can also refer issues for the consideration of the council of members.

27. A

- Pro-tem is a Latin phrase which means “for the time being”. The Pro tem Speaker is a temporary speaker appointed for a **limited period of time.**
- **The need of pro-tem speaker:** The speaker of the Lok Sabha/legislative assembly vacates the office immediately before the first meeting of the newly elected house.

- **President/governor appoints the pro-tem speaker** to preside over the sittings of the newly elected house. Usually, the senior most member of the house is made the pro-tem speaker.
- Duties of pro tem speaker:
 - The Pro-tem Speaker presides over the first sitting of the Lok Sabha, administers the oath of office to the newly elected MPs.
 - To conduct the vote for the speaker and deputy speaker.
 - **On the election of new Speaker, the office of the pro tem speaker ceases to exist.**
 - He also administers the floor test.

28. C

- Temperature affects the kinetics of enzymes and through basal metabolism, activity and other physiological functions of the organism. A few organisms can tolerate and thrive in a wide range of temperatures (they are called eurythermal), but, a vast majority of them are restricted to a narrow range of temperatures (such organisms are called stenothermal). The levels of thermal tolerance of different species determine to a large extent their geographical distribution.
- Some organisms are tolerant of a wide range of salinities (euryhaline) but others are restricted to a narrow range (stenohaline). Many freshwater animals cannot live for long in sea water and vice versa because of the osmotic problems, they would face.

29. C

A comprehensive central legislation was enacted in 1972 called the Wildlife (Protection) Act for providing special legal protection to our wildlife and to the endangered species of fauna in particular.

- Wild Life (Protection) Act, 1972 provides a legal framework for the protection of various species of wild animals and plants, the management of their habitats, and the regulation and control of trade in wild animals, plants and products made from them. The Act also lists schedules of plants and animals that are afforded various degrees of protection and monitoring by the government. The Act provides for punishment for violation of its provisions. The Act also provides for forfeiture of any equipment, vehicle or weapon that is used for committing wildlife offence(s).
- Wildlife Protection Act, 1972 forbids hunting and poaching of wild animals. But under section 11 of the Act, hunting of wild animals is permitted in the following cases.
 - The Chief Wild Life Warden may, if he is satisfied that any wild animal specified in Schedule I of the Wildlife Protection Act, 1972 has become dangerous to human life or is so disabled or diseased as to be beyond recovery, permit any person to hunt such animal.
 - The killing or wounding in good faith of any wild animal in defence of oneself or of any other person shall not be an offence.
 - Any wild animal killed or wounded in defence of any person shall be Government property.

30. A

Desert Ecosystem: Deserts make up about one-fifth of the surface of the earth and occur where rainfall is less than, 50 cm/year. The major deserts are the Sahara, the Arabian, Kalahari, and Namib of Africa, the Atacama of South America, the Mojave,

Sonoran, and Chihuahuan of North America, and the Australian deserts. Besides, there are the Thar Desert in western India and Pakistan and the Gobi Desert of Mongolia.

Features of Desert Ecosystems include:

- The soil in the desert is coarse. They are coarse because there is less chemical weathering. The finer dust and sand particles are blown elsewhere, leaving heavier pieces behind.
- Canopy in most deserts is very rare. Plants are mainly ground-hugging shrubs and short woody trees.
- In the deserts, days are very hot and nights are cold. So the plants and animals are exposed to both types of extremes.
- The predominant plants found in the deserts are succulent species with waxy surfaces, such as cacti. which can conserve water for longer periods of time, or deciduous shrubs, also with thick waxy leaves.
- The animal types in the deserts are few. These include burrowing and nocturnal rodents, reptiles, insects, and arachnids (Scorpions, spiders, etc.). These animals adapt themselves to the temperature extremes and desiccation of desert air by living beneath the surface during the day and moving out only at night. Most of them have remarkable water conservation adaptations.
- Most of the animals living in the deserts are nocturnal (active only at night). Common animals are camels, foxes, kangaroos, rats, squirrels, etc.
- Many of the insects have waxy coats and reduced water loss through the cuticles.
- The amount and kinds of plants vary according to where a desert is located. Short grasses can be found in nearly all deserts. Desert plants include sagebrush, creosote bushes, and cacti.

31. C

Indian Forest Act, 1927 is an act to consolidate the law relating to forests, the transit of forest produce and the duty leviable on timber and other forest produce.

- According to the act, The State Government is empowered to notify forest land as the property of the Government and appoint officers to take care of forest land.
- The act gives many powers to the State Government which include
 - State Government can declare the trees in a protected forest as reserved.
 - State Government may prohibit the quarrying of stone, burying of lime or charcoal or removal of any forest produce in a forest.
 - State Government may assign to a village community the rights of government over any land that has been constituted as a reserve forest.

32. A

A National park is an area which is strictly reserved for the betterment of the wildlife and where human activities like forestry, grazing or cultivation are not permitted'. A National Park is defined by state government via notification. The state government can fix and alter boundaries of the National Parks with prior consultation and approval with National Board of Wildlife.

- Jim Corbett National Park: Established in 1936, this is India's first national park. It is named after the legendary naturalist and conservationist Jim Corbett. Located at the Himalayas' foothills (Uttarakhand), near the popular hill-station of Nainital, it is

famous for being home to a large number of tigers, the highest among any Indian national park

- Core zone: It is an undistributed and legally protected ecosystem. ie, in this no human activity is permitted.
- Transition zone: The outermost region of the biosphere is termed transition zone. It is the area of active cooperation between reserve management and the local people.

33. A

- Biological Oxygen Demand is defined as the amount of dissolved oxygen required by aerobic microorganisms to break down the organic materials in a sample of water at a specific temperature & timeframe
- BOD measures the amount of oxygen utilized by microorganisms for the process of decomposition of the organic matter in the water bodies.
- Biological oxygen demand can be used as an indicator of the level of environmental pollution. For instance, the higher the levels of organic matter (in polluted water bodies or sewage), the greater the BOD.

34.D

Methane, ethylene and aniline are three examples of hydrocarbons. Hydrocarbons are also produced due to incomplete combustion of fuels, automobile exhausts, petroleum refineries, burning of crop residues, cracking of natural gas in petrochemical plants etc. Major sources of release of hydrocarbons are organic matter, seepage from natural gas and oil fields and emissions of Volatile Organic Chemicals (VOCs).

35. D

Biodiversity can be defined as a community of all the living organisms on the earth and the diversity among them from all the ecosystems. Biodiversity is thus the variability between the species, within the species, and between the ecosystem.

- The diversity of plants and animals is not uniform throughout the world but shows a rather uneven distribution. For many groups of animals or plants, there are interesting patterns in diversity, the most well-known being the latitudinal gradient in diversity.
- In general, species diversity decreases as we move away from the equator toward the poles. With very few exceptions, tropics (latitudinal range of 23.5° N to 23.5° S) harbor more species than temperate or polar areas.
- India, with much of its land area in the tropical latitudes, has more than 1,200 species of birds. A forest in a tropical region like Equador has up to 10 times as many species of vascular plants as a forest of equal area in a temperate region like the Midwest of the USA.

36. D

The Environment (Protection) Act was enacted in 1986 with the objective of providing for the protection and improvement of the environment. It empowers the Central Government to establish authorities charged with the mandate of preventing environmental pollution in all its forms and to tackle specific environmental problems that are peculiar to different parts of the country.

- The Environment (Protection) Rules, 1986 lay down procedures for setting standards of emission or discharge of environmental pollutants.
- It gives certain rights to the Central Government which include the following:
 - o Set standards for the emission of pollutants from any source.
 - o Laying down procedures and safeguards for handling hazardous substances.
 - o Making rules in matters pertaining to environmental protection as well as to pollution.

37. C

Coral reefs: Corals are massive wave-resistant structures built largely by coral and consisting of skeletal and chemically precipitated material. These are made by polyps i.e. animals belonging to the class Coelenterata.

o In the Indian seas, coral reefs are found in the Gulf of Mannar, Palk-bay, Lakshadweep (atolls), Gulf of Kutch, and Andaman and Nicobar sea areas.

38. C

- Bioindicators are living organisms such as plants, planktons, animals, and microbes, which are utilized to screen the health of the natural ecosystem in the environment. The bio-indicators are very useful in finding out pollution because they help in the identification of the type of pollution. Let us take a few examples
 - o The presence of Coliform bacteria indicates water pollution due to fecal matter.
 - o The movement of Catla and Labeo (Rohu) fish species away from their habitat shows pollution of water due to industrial waste. Similarly, the death of Amphibians and fish in pond water shows Eutrophication.
 - o The abundance of diatoms and Eichhornia in water indicate pollution due to the mixing of sewage in the water.

39. D

- Leatherback Turtle is the largest of the living sea turtles, weighing as much as 250 700 kg.
- Distribution: Found in tropical and temperate waters of the Atlantic, Pacific, and the Indian Oceans.
- Jellyfish is their primary food.
- Habitat: Tropical and subtropical oceans.
- Threats: High sea fishing operations, harvesting of eggs, destruction of nests by wild predators and domesticated species such as cats, dogs and pigs, artificial lighting disorients hatchlings and adults and causes them to migrate inland rather than towards the sea.
- Conservation Status:
 - IUCN Red List Status: Vulnerable
 - Wildlife Protection Act: Schedule I
 - CITES: Appendix I

40. D

Ecological Fiscal Transfers (EFT) transfer public revenue between governments within a country based on ecological indicators. It is a type of conditional environmental payments which involves payments from higher levels of a country's government (e.g. national) to lower levels (e.g. state or local).

- EFTs distribute a share of intergovernmental fiscal transfers and revenue sharing schemes according to ecological indicators such as protected areas or watershed management areas etc. These conservation areas thus become a source of income for the receiving governments. Today, EFT are often seen as an instrument that incentivizes decentralized conservation efforts.
- States are motivated to protect & restore forests as an investment in future revenue from EFTs.

41. C

42.C

Radar Imaging Satellite or RISAT is a series of Indian radar imaging reconnaissance satellites built by ISRO.

- India had in April 2009 launched RISAT-2, the first of the series to reach orbit. It was bought from Israel for USD 110 million largely for surveillance purposes. This Satellite enhanced ISRO's capability for Disaster Management applications.
- In 2012, ISRO then launched what was India's first indigenous all-weather radar imaging satellite, known as RISAT-1. With a 160 x 4 Mbit/s data handling system and 50 Newton-meter-second reaction wheels, the satellite provides all-weather surveillance using synthetic aperture radars (SAR).

43. C

- A habitat always has life in it, whereas the environment does not necessarily have life in it.
- A habitat is always a preference of one species, whereas an environment could be a preference of many species that could eventually become many habitats.
- Usually, the environment governs the properties of a habitat, *but not vice versa*.
- There is no natural habitat on earth that is inhabited only by a single species and such a situation is even inconceivable. For any species, the minimal requirement is one more species on which it can feed. Even a plant species, which makes its own food, cannot survive alone; it needs soil microbes to break down the organic matter in soil and return the inorganic nutrients for absorption.

44.B

- Cryopreservation is the only ex situ conservation method for the long-term preservation of species that cannot be stored in seed banks

45. D

46.B

Kaziranga National is famous for the Big Five namely the Rhinoceros, Tiger, Elephant, Asiatic Wild Buffalo, and Eastern Swamp Deer.

- Kaziranga National Park is a UNESCO world heritage site. It is spread across the river Brahmaputra.

47. C

Photoperiodism is the response to changes in daylength that enables plants to adapt to seasonal changes in their environment.

- The best studied example of photoperiodism in plants is flowering, but other responses to day length include bud dormancy and bulb or tuber initiation. Seasonal flowering in response to day length helps species to adapt to particular habitats and synchronize flowering for maximum pollination efficiency. Daylength is perceived in leaves, while the response occurs elsewhere in the plant.
- Plants that flower only when day length drops below a certain threshold are called short-day plants. Rice is an example of a short-day plant.
- Plants that flower only when day length rises above a certain threshold are called long-day plants. Spinach and sugar beets are long-day plants.
- By flowering only when day or night lengths reach a certain threshold, these plants are able to coordinate their flowering time with changes in the seasons.

48. D

49. B

The G-20 finance track focuses on strengthening **international financial architecture and** It will also aim to address various challenges faced by vulnerable countries.

The first International Financial Architecture Working Group meeting of the G-20 under the chairmanship of India will be held in Chandigarh on January 30 and 31, 2023.

50. C

51. B

The Soligas were traditionally dependent on hunting and shifting agriculture, and they are the first tribal community living inside the core area of a tiger reserve in India to get their forest rights officially recognised by a court of law.

Biligiri Rangan Hills are located northwest of the Western Ghats and on the westernmost edge of the Eastern Ghats.

52. C

It is levied on the capital raised via the issue of shares by unlisted companies from an Indian investor if the share price of the issued shares is seen as being in excess of the fair market value of the company.

The excess funds raised at prices above fair value are treated as income, on which tax is levied.

It derives its genesis from Section 56(2)(viib) of the Income Tax Act of 1961. It was introduced in 2012 to prevent black money laundering through share sales.

The angel tax is levied at a rate of 30.9% on net investments in excess of their fair market value.

53. B

The 'Jaadui Pitara' or 'Magic Collection' is a play-based learning material for children in the age range of three to eight years. It was launched by the Union Ministry of Education.

It has been designed on the motto of "learning through play," as envisaged in the new National Education Policy (NEP). It comprises playbooks, toys, puzzles, posters, flashcards, storybooks, and worksheets, as well as reflecting the local culture, social context, and languages.

54. C

Kendu leaf is called the **green gold of Odisha**, and it is a **nationalised product like bamboo and sal seed**. It is one of the most **important non-wood forest products in Odisha**. It is also referred to as "**tendu leaf**" in some parts of the country and is **used to roll tobacco into bidis**.

55. A

The Valmiki Tiger Reserve forms the **easternmost limit of the Himalayan Terai** forests in India, and it is the only tiger reserve in Bihar, which is situated in the Gangetic Plains biogeographic zone of the country. The forest of this region has a combination of **bhabar and terai tracts**.

56. A

Harike Wildlife Sanctuary, situated at the confluence of two **major rivers in Punjab, the Sutlej and the Beas**,

Harike wetland came into existence in 1953 due to the construction of a barrage on the River Sutlej. It has been designated as one of the **Ramsar sites** in India. This is a man-made, riverine wetland that spreads across three districts in **Punjab**.

57. B

It is being held as part of the ASEAN-India Year of Friendship to commemorate the more than three-decade-long engagement between India and the 10-member bloc in Kuala Lumpur.

58. C

The Emergency Credit Line Guarantee Scheme (ECLGS) was launched by the Government of India in 2020 as a special scheme in **view of the COVID-19 crisis**. **Its purpose is to provide 100 percent guaranteed coverage to the banks**, non-banking financial institutions (NBFIs), and other lending institutions **to extend emergency credit to business entities that have suffered due to the COVID-19 pandemic** and are struggling to meet their working capital requirements.

59. C

These are highly reactive reagents, making them difficult to produce and use. It enables non-biodegradable fluorinated hydrocarbons (similar to Teflon) to be converted back into sustainable chemicals. It can even convert climate-damaging greenhouse gases, such as sulphur hexafluoride, into sustainable ones.

60.C

They are a volcanic island group in the South Pacific Ocean, about 600 miles (1,000 km) northeast of Auckland, New Zealand. The islands are a volcanic island arc, formed at the convergent boundary where the Pacific Plate subducts under the Indo-Australian Plate. They are the tiny emergent part of the Kermadec ridge's chain of submarine volcanoes.

61.C

This national park is a **major habitat for aquatic birds**, including migratory and resident birds.

It has a major vegetation of tropical and dry deciduous. It has a flora of grasses: dhok, khair, tendu, ber, jamun, banyan tree, neem, berberis, Acacia nilotica, and Acacia tortilis.

62.C

Its **official languages are Arabic, English, and French. The headquarters** are situated in Jeddah, Saudi Arabia. **It is the second-largest intergovernmental organisation in the world, with a collective population of over 1.8 billion.**

63.A

Sagittarius is located in the constellation Sagittarius. It has a mass equivalent to four million suns.

13th-century Hindu temple ruins have been unearthed amidst a shrub jungle northeast of the Durga temple, atop a hillock in the Pushpagiri Kshetram in **Kadapa district, Andhra Pradesh**. The architectural features of the ruins reveal a style that is contemporary with a temple at Vallur, **built by the Kayastha rulers. The Kayasthas were subordinates to the Kakatiya dynasty's rulers.**

64.B

It is an initiative **to promote start-ups, women, and youth advantages through e-transactions** on the **Government e-Marketplace (GeM)**. The intent was to promote the inclusiveness of various categories of sellers and service providers on the portal.

GeM is an online market platform established in 2016 by the Directorate General of Supplies and Disposals (DGS&D) of the Ministry of Commerce and Industry.

65.C

The Election Commission of India is an **autonomous and permanent constitutional body** responsible **for organising free and fair elections in India**. The Constitution grants the ECI the power of direction, supervision, and control over **elections for Parliament, state legislatures**, the office of **president of India**, and the office of **vice president of India**.

66.B

Easter Island, **also called Rapa Nui**, is a **remote Chilean territory** located in the **Pacific Ocean**, roughly 2,200 miles from mainland Chile. It is one of the **most remote inhabited places in the world**.

The fellowship offers non-resident Indian (NRI) researchers an opportunity to work for a **minimum of one month and a maximum of two months a year** with a research institution or an academic institution in India.

67.C

The project aims to encourage companies from the public sector, private sector, corporate citizens, NGOs, individuals, and other stakeholders to become 'Monument Mitras'.

They will take up the responsibility of developing and upgrading the basic and advanced tourist amenities at these sites as per their interest and viability in terms of a sustainable investment model under CSR.

The monument monitors are selected by the "oversight and vision committee," co-chaired by the Tourism Secretary and the Culture Secretary.

68.A

69.C

70. B

The Archaeological Survey of India (ASI) plans to replace damaged bricks and plant trees as a protective barrier at the Jatar Deul temple in West Bengal to prevent corrosion of the terracotta temple.

A copper plate found near the temple in 1875 suggests that Raja Joychandra constructed the temple in 975 AD.

71. B

It is a **swallowtail butterfly with a wingspan of 100–120 mm**. It has an **extra white spot on the dorsum** of the forewing.

They are found in **Myanmar**, **Yunnan**, Hubai (China), **North Thailand**, Laos, Cambodia, and **Vietnam**.

72.C

It is established to **implement the provisions of the Chemical Weapons Convention (CWC)** in order to achieve the OPCW's vision of a **world that is free of chemical weapons and of the threat of their use**, and in which cooperation in chemistry for peaceful purposes for all is fostered.

Its **headquarters** are located in **The Hague, the Netherlands**.

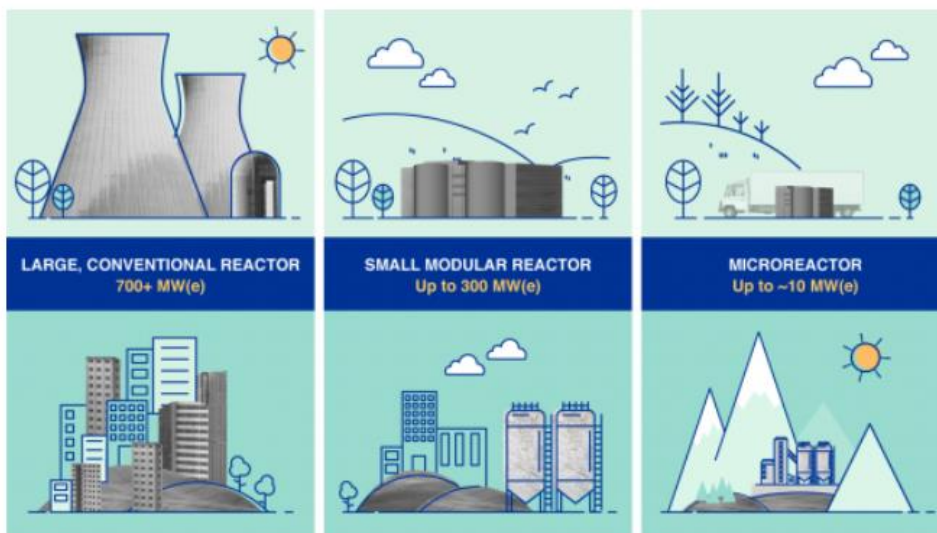
73.A

Genomic surveillance is the process of constantly monitoring pathogens and analyzing their genetic similarities and differences. Recognizing the need for global collaboration in strengthening genomic surveillance, WHO has coordinated the development of the 10-year Global genomic surveillance strategy for pathogens with pandemic and epidemic potential 2022 - 2032. The initiative is powered by a vision to unite, inform and strengthen genomic surveillance efforts at country, regional and global levels.



74.B

Small modular reactors (SMRs) are advanced nuclear reactors that have a power capacity of up to 300 MW(e) per unit, which is about one-third of the generating capacity of traditional nuclear power reactors. SMRs, which can produce a large amount of low-carbon electricity, are: **Small** – physically a fraction of the size of a conventional nuclear power reactor. **Modular** – making it possible for systems and components to be factory-assembled and transported as a unit to a location for installation. **Reactors** – harnessing nuclear fission to generate heat to produce energy.



75.C

Specific objectives of the 'National Biotechnology Parks Scheme' are as follows:

1. To develop high quality basic infrastructure and high end central equipment facilities with the required support services for undertaking Research & Development, product development, piloting and validation by SMEs and Biotech Industries.
2. To boost the biotechnology sector across the country by incentivizing States for setting up biotechnology parks.
3. Strengthening the existing infrastructure facilities in order to make Indian Biotech industry a global leader.
4. To foster innovation and entrepreneurship
5. To facilitate establishment of a congenial ecosystem for the growth of biotechnology industry
6. To enhance competitiveness of biotechnology industry by providing easy access to robust infrastructure and enabling environment

The Department of Biotechnology has established Biotechnology Parks/ Incubators to translate research into products and services across the country by providing necessary infrastructure support. It provides facilities to scientists, and Small and Medium sized Enterprises (SMEs) for technology incubation, technology demonstration and pilot plant studies for accelerated commercial development of biotechnology sector in the country.

Biotech parks:

- i) Biotech Park, Lucknow, Uttar Pradesh; ii) Biotechnology Incubation Centre, Hyderabad, Telangana; iii) Tidco Centre For Life Sciences (TICEL) Biotech Park, Chennai, Tamil Nadu; iv) The Golden Jubilee Biotech Park For Women, Chennai, Tamil Nadu; v) Biotech Park Technology Incubation Centre, Guwahati, Assam; vi) Biotechnology Incubation Centre, Cochin, Kerala; vii) Biotechnology Park, Bangalore, Karnataka; viii) Industrial Biotechnology Parks (IBTPs), Jammu & Kashmir; and ix) Chhattisgarh Biotech Park, Naya Raipur, Chhattisgarh.

76.A

Toyota's first of its kind pilot project on Flexi-Fuel Strong Hybrid Electric Vehicles (FFV-SHEV) in India today which would run on 100% petrol as well as 20 to 100% blended ethanol and electric power.

To meet the demand of ethanol converting surplus foodgrain and sugar into ethanol could be boosting rural economy.

77.A

The first commercially available quantum computer was released in 2011 by D-Wave Systems.

In 2019, IBM released the Quantum System One, and in November 2022, it unveiled the largest quantum computer yet, Osprey.

Qubits can be made from trapped ions, photons, artificial or real atoms or quasiparticles, while binary bits are often silicon-based chips.

78.D

LIGO - A Gravitational-Wave Interferometer

LIGO currently consists of two interferometers, each with two 4 km (2.5 mile) long arms arranged in the shape of an "L". These instruments act as 'antennae' to detect gravitational waves. In the links below, you will learn much more about interferometers and how LIGO actually works.

Gravitational waves are ripples in space-time (the fabled "fabric" of the Universe) caused by massive objects moving with extreme accelerations. In outer space that means objects like neutron stars or black holes orbiting around each other at ever increasing rates, or stars that blow themselves up. Explore the links below to learn more about these ephemeral phenomena.

Albert Einstein predicted the existence of gravitational waves in 1916 in his general theory of relativity. Einstein's mathematics showed that massive accelerating objects (such as neutron stars or black holes orbiting each other) would disrupt space-time in such a way that 'waves' of undulating space-time would propagate in all directions away from the source. These cosmic ripples would travel at the speed of light, carrying with them information about their origins, as well as clues to the nature of gravity itself.

79.C

JWST's primary mirror is coated with gold to reflect as much infrared as possible into the secondary mirror which will enable the telescope to collect maximum light.

JWST orbits a point called L2 which lies directly opposite to the Sun million km from the earth to shadow itself from the infrared radiation from the sun.

80.C

Project NETRA is an early warning system to secure its satellites and other assets in space.

Under this ISRO plans to put up many observational facilities: connected radars, telescopes, data processing units and a control center.

They can spot, track and catalogue objects as small as 10 cm, up to a range of 3,400 km and equal to a space orbit of around 2,000 km.

It gives India its own capability in space situational awareness (SSA) like the other space powers — which is used to ‘predict’ threats from debris to Indian satellites. It also goes so far as to serve as an unstated warning against missile or space attack for the country.

Under this project, SSA was first used for low-earth orbits or LEO which have remote-sensing spacecraft.

NETRA’s eventual goal is to capture the GEO, or geostationary orbit, seen at 36,000 km where communication satellites operate.

81. B

Digital India is marching ahead inexorably. Digital interfaces and communications have become critical for access to information, entertainment, economic opportunities and even essential services such as healthcare.

Project Vaani, by IISc, Bangalore and ART PARK, is capturing the true diversity of India’s spoken languages to propel language AI technologies and content for an inclusive Digital India.

We expect to create data corpora of over 150,000 hours of speech, part of which will be transcribed in local scripts, while ensuring linguistic, educational, urban-rural, age, and gender diversity (among other potential diversity characteristics). These diligently collected and curated datasets of natural speech and text from about 1 million people across all 773 districts of India will be open-sourced. The current version of the data is open-sourced [here](#). Going forward, we hope to open source through platforms like Bhashini (under the National Language Translation Mission, MeiTY).

This will boost the development of technologies such as automatic speech recognition (ASR), speech to speech translation (SST), and natural language understanding (NLU) that reflect the ground realities of how Indians speak.

Google is funding the Project Vaani.

82. D

Nuclear fusion occurs when two atoms fuse to create a stabler, heavier nuclei producing gamma rays in the process.

Nuclear fusion is the principle used in thermonuclear bombs but it was not used in WW2.

Nuclear fusion of hydrogen is the main source of energy in the Sun and it continues until all the substance becomes Carbon.

83. B

The given descriptions owned by Kandukuri Veeresalingam (1848-1919). He produced large number of pamphlets and tracts on social reform in the Telugu language. So he is claimed to be the father of Telugu prose literature

- He organized first widow marriage in the whole – South India at Rajahmudry, in 1881
- So he was called by M.G.Ranade as Ishwar Chandra Vidyasagar for Deccan
- He started his monthly Telugu Magazine called vivekavardhini

84.B

Statement is correct → Portuguese build their first – fort at Kochin, namely Fort. Emmanuel in 1503, because Kochin served as their capital at that time

- Sikandar Lodi was the Delhi Sultan during the arrival of Vasco da Gama. His reign was from 1489-1517 CE
- Alfonso-de-Albuquerque only captured Goa from Bijapur Sultan in 1510. But Nino De Cunha in late 1527 changed the capital from Cochin to Goa

85.A

Bangabhasha Prakasika Sabha in Bengal was established in 1836 by the Associates of Raja Ram Mohan Roy to discuss government policies and seek redressal through petition and memorandums

- Zamindari Association/land holders society was- established in Bengal in 1837 by land lords of Bengal, Bihar and Odisha namely, Dwarkanath Tagor, Radhakanda Deb and others. Main objective was to safeguard the landlords interest.
- Bengal British India society was formed in 1843 by George Thompson, Dwarkanath Tagore, Parmananda Mitra and Chandra Mohan Chatterjee. Objective was to collect and disseminate information related to actual condition people in India
- British India Association (Bengal) was formed in 1851 by the merger of landholders society and Bengal British India Society

86.D

1916 Lucknow pact was signed in Lucknow congress session between INC and all India Muslim league. Through this pact congress accepted separate electorate for Muslims given in the 1909 council act

- This session was also known for as moderates and extremist reunion. So Tilak and Annie Beasant was the main architect of the Lucknow pact as well as reunion.
- Though Tilak was considered to be the Nationalist, he had some conservative thoughts also. He was against the women's getting modern education
- He along with the M.G. Ranade, Gopal Ganesh Agarkar started the Deccan education society in 1884 and Fergusson College in Pune 1885

87.B

As per 1919 council Act, the council of state had tenure of 5 years and central legislative assembly had a tenure of 3 years.

- Transfer subjects were administered by governor on the advice of council of minister, on the other had reserved subjects were administered by governor on the recommendation of his executive council
- Legislative subjects were divided into two namely, Federal, Provincial only

88.C

Wahabi movement centered around Patna, a revivalist movement started by Syed Ahmed Barelvi (178-1831)

- They want to change India from dar-ul-Harb (land of Kafirs) to dar-ul-Islam (land of Islam)
- British wants curb the movement so they add sedition provision into IPC

89.D

All the Pairs are correct

90.D

In 1917, he founded the Indian home rule league of America in New York. He stayed in the US from 1917 to 1920

91.C

- Archean rocks (>4 billion years) – Garnet semi precious stones
- Dharwarian rocks (3-4 billion years) – All ferrous metals (Fe, Ni, Cr, Mn etc)
- Cuddapah rocks (2-3 billion years) – All non-ferrous metals (Cu, Pb, Zn, Ag etc.)
- Vindhyan rocks (800 million years – 2 billion years) – Diamond bearing kimberlite rocks; glass making sands
- Carboniferous rocks (300-200 m years) – coal seams
- Tertiary rocks (65 m years later)- Tertiary coal; oil and natural gas

92.D

1. Convective rain: Occurs when warm and moist air is uplifted because of strong insolation heating up of the ground this type of rainfall is associated with cumulonimbus clouds
2. Warm frontal precipitation: When warm and moist air gradually ascends over gently sloping cold air wedge nimbostratus rain bearing system results.. This rain bearing cloud is associated with gentle to moderate precipitation without any thunder and lightning
3. Cyclonic rainfall is also related with cumulonimbus rain bearing system. This cloud is characterised with heavy downpour accompanied with thunder and lightning.

Lenticular clouds are lens shaped cloud that normally develops on the downwind side of a mountain or mountain range. There is no significant weather produced by a lenticular

93.A

Steam fog results when very cold airmasses trespass over comparatively warmer water surface

(e.g.) cold airmass (<-40°C) originates from Canadian high, moves over great lakes (>1°C) during winter it causes steam fog. Sea fog results when cold water surface trespassed by warm and moist air. This is regular phenomena in the region where cold ocean current and warm ocean current meet

94.C

1. Differential densities of the earth at different depth is responsible for refraction deflection and reflection of seismic waves
2. Refraction of 'P' waves causes the waves to reappear beyond 145°
3. Deflection of 'S' waves at the surface of liquid outer core causes the shadow zone of S waves beyond 105°
4. Tilt of earth has no role as far as the existence of shadow zone of earth quake waves one concerned

95.B

- (a) Trenches are the features associated with convergent destructive plate margin
- (b) Mid-oceanic-ridges are the features of divergent or constructive plate margin
- (c) Coral reefs are of biotic origin

(d) Island Arcs and festoons are associated with convergent (or) destructive plate margin

96.D

- a. Nomadic herding is a type of primitive subsistence farming in which the herders rely on animals for food, clothing, shelter, tools and transport. They transmigrate from one place to another with their herds in order to seek pasture and water. Regions: Central Asia, Northern and Western region of Africa (Desertic regions)
- b. Subsistence agriculture is one in which the farming areas consume all or nearly so of the products locally grown. This farming is practiced by the people of tropics (Africa, South and Central America and South East Asia)
- c. Dairy farming and fishing are twin most important economic activities of British type climate
- d. Commercial grain farming is the most important economic activities of temperate grasslands of the world

97.A

Because of the existence of this lofty Himalaya, which will not allow the cold airmasses to intrude freely into India and hence warm of entire India is consistently maintained throughout the year

98.B

Explanation Laterisation is the process in which silica (Quartz sand) is leached and oxides of the and Al is left out in the top horizon, that imparts the soil hard, tough and rigid pan called laterite. The related climate must be high temperature and high precipitation with alternate wet and dry season (Tropical monsoon climate).

99.D

- Riga Valley is located in Changthang valley of Jammu & Kashmir
- Geothermal energy site
- Well known for its hot sulphur springs which can cure skin disease and rheumatism
- It is not at all a national park

100.D

- (a) Shariya tribe – a vulnerable tribal group live in 8 districts of Madhya Pradesh
- (b) Gujjars, Bakarwals & Paharis are the tribal of vale of Kashmir, Jammu and Kashmir
- (c) Gaddi Tribes of Lahul and Spiti valley of Himachal Pradesh
- (d) Kutia – Kandh tribes of Kalahandi and Khandamal districts of Orissa