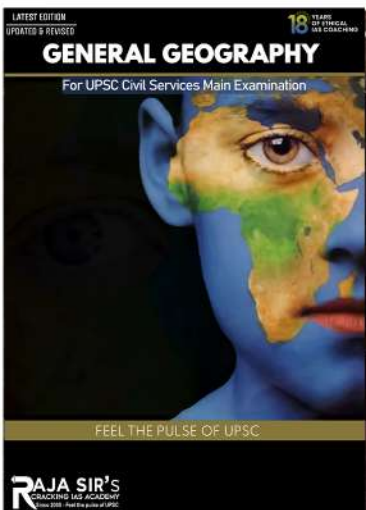
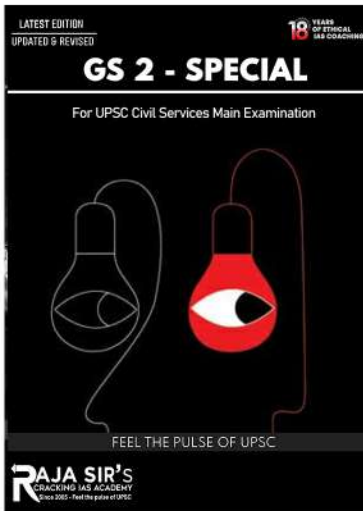


# MONTHLY GENERAL STUDIES QUIZ



## Consider the following statements regarding Preeclampsia

1. People with preeclampsia often have high blood pressure.
2. And they also high levels of protein in their urine.

Select the correct answer using the code given below:

- (a) 1 only.
- (b) 2 only.
- (c) Both 1 and 2.
- (d) Neither 1 nor 2.

## Kylinxia zhangii which is recently seen in news refers to

- (a) a type of bacteria
- (b) an arthropod that lived in the early Cambrian period
- (c) a toxic mycotoxin produced by several types of fungi
- (d) ancient Port city

## Consider the following statements regarding Phanigiri artefacts

1. Phanigiri artefacts shows both Mahayana and Hinayana schools of thought.
2. It is located in the state of Andhra Pradesh.

Select the correct answer using the code

- (a) 1 only.
- (b) 2 only.
- (c) Both 1 and 2.
- (d) Neither 1 nor 2.

1. Consider the following statements regarding Preeclampsia
  1. People with preeclampsia often have high blood pressure.
  2. And they also high levels of protein in their urine.Select the correct answer using the code given below:
  - (a) 1 only.
  - (b) 2 only.
  - (c) Both 1 and 2.
  - (d) Neither 1 nor 2.
2. Kokborok which is recently seen in news refers to
  - (a) Air-to-air missile of Israel.
  - (b) a ancient technique in shipbuilding.
  - (c) a language spoken in the State of Tripura.
  - (d) an animal behaviour of performing courtship displays.
3. Consider the following statements regarding *Dholes*
  1. They are endemic to India.
  2. They are classified as Endangered in IUCN Red list.Select the correct answer using the code given below:
  - (a) 1 only.
  - (b) 2 only.
  - (c) Both 1 and 2.
  - (d) Neither 1 nor 2.
4. What does high COD to BOD ratio of an organic pollutant represent ?
  - (a) High biodegradability of the pollutant
  - (b) Low biodegradability of the pollutant
  - (c) Presence of free oxygen for aerobic decomposition
  - (d) Presence of toxic material in the pollutants
5. Which of the following is known as Swedish initiative?
  - (a) Stockholm convention
  - (b) United nations conference on human environment
  - (c) Bonn challenge
  - (d) United nations conference on sustainable development
6. *Kylinxia zhangi* which is recently seen in news refers to
  - (a) a type of bacteria
  - (b) an arthropod that lived in the early Cambrian period
  - (c) a toxic mycotoxin produced by several types of fungi
  - (d) ancient Port city
7. Which of the following are the exclusive powers of the Lok Sabha?
  1. To introduce money bills
  2. To ratify the declaration of Emergency
  3. To pass a motion of non-confidence against the Council of Ministers
  4. To impeach the

- President  
Codes:  
(a) 2 and 4  
(b) 1 and 3  
(c) 2 and 3  
(d) 1 and 4
8. As regards the use of international food safety standards as reference point for the dispute settlements, which one of the following does WTO collaborate with?  
(a) Codex Alimentarius Commission  
(b) International Federation of Standards Users  
(c) International Organization for Standardization  
(d) World Standards Cooperation
9. 1. According to the order of precedence Lok Sabha Speaker is the fifth in position.  
2. Speaker appoints the members of the various committees of the Parliament.  
3. On election as the Speaker, he/she has to resign from the political party on whose ticket he/she was elected.  
Codes:  
(a) 1 only  
(b) 2 only  
(c) 1 and 3  
(d) 2 and 3
10. With reference to 'Urban Cooperative Banks' in India, consider the following statements:  
1. They are supervised and regulated by local boards set up by the State Governments.  
2. They can issue equity shares and preference shares.  
3. They were brought under the purview of the Banking Regulation Act, 1949 through an Amendment in 1966.  
Which of the statements given above is/are correct?  
(a) 1 only  
(b) 2 and 3 only  
(c) 1 and 3 only  
(d) 1, 2 and 3
11. 1. A Kitchen Cabinet' is a group of unofficial advisers to the political chief, especially when considered more influential than the Official Cabinet.  
2. The Cabinet is the apex organ of the administrative hierarchy in a parliamentary democracy like India.  
3. According to the Constitution of India, the President can directly take over the reins of administration, from the Council of Ministers headed by the Prime Minister.  
Codes:

- (a) 2 only
- (b) 1 and 2
- (c) 1 and 3
- (d) 1, 2 and 3

12. With reference to the history of ancient India, which of the following statements is/are correct?

1. Mitakshara was the civil law for upper castes and Dayabhaga was the civil law for lower castes.
2. In the Mitakshara system, the sons can claim right to the property during the lifetime of the father, whereas in the Dayabhaga system, it is only after the death of the father that the sons can claim right to the property.
3. The Mitakshara system deals with the matters related to the property held by male members only of a family, whereas the Dayabhaga system deals with the matters related to the property held by both male and female members of a family.

Select the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 2 only
- (c) 1 and 3 only
- (d) 3 only

13. Which of the following can be

found as pollutants in the drinking water in some parts of India?

1. Arsenic
2. Sorbitol
3. Fluoride
4. Formaldehyde
5. Uranium

Select the correct answer using the codes given below.

- (a) 1 and 3 only
- (b) 2, 4 and 5 only
- (c) 1, 3 and 5 only
- (d) 1, 2, 3, 4 and 5

14. What is the difference between “vote-on-account” and “interim budget”?

1. The provision of a “vote-on-account” is used by a regular Government, while an “interim budget” is a provision used by a caretaker Government.
2. A “vote-on-account” only deals with the expenditure in Government’s budget, while an “interim budget” includes both expenditure and receipts.

Which of the statements; given above is/are correct?

- (a.) 1 only
- (b.) 2 only
- (c.) Both 1 and 2
- (d.) Neither 1 nor 2

15. The “Miyawaki method” is well known for the:

- (a) Promotion of commercial farming in arid and semi-arid areas
- (b) Harvesting wind energy on coastal areas and on sea surfaces
- (c) Development of gardens genetically modified flora using
- (d) Creation of mini forests in urban areas

16. If a major solar storm (solar flare) reaches the Earth, which of the following are the possible effects on the Earth?:

- 1. GPS and navigation systems could fail.
- 2. Tsunamis could occur at equatorial regions.
- 3. Power grids could be damaged.
- 4. Intense auroras could occur over much of the Earth.
- 5. Forest fires could take place over much of the planet.
- 6. Orbits of the satellites could be disturbed
- 7. Shortwave radio communication of the aircraft flying over polar regions could be interrupted.

Select the correct answer using the code given below; (a) 1, 2, 4 and 5 only

- (b) 2, 3, 5, 6 and 7 only
- (c) 1, 3, 4, 6 and 7 only
- (d) 1, 2, 3, 4, 5, 6 and 7

17. Biodiversity forms the basis for human existence in the

following ways :

- 1. Soil formation
- 2. Prevention of soil erosion
- 3. Recycling of waste
- 4. Pollination of crops

Select the correct answer using the codes given below:

- (a.) 1, 2 and 3 only
- (b.) 2, 3 and 4 only
- (c.) 1 and 4 only
- (d.) 1, 2, 3 and 4

18. Proclamation of emergency by the President of India can be made on the written advice of the Cabinet only. This provision has been added

- (a) after 44th Constitutional Amendment.
- (b) after 42nd Constitutional Amendment.
- (c) by the Constituent Assembly in the Constitution of India.
- (d) by the Supreme Court of India. in 1975.

19. Regarding the Indus Valley Civilization, consider the following statements

- 1. It was predominantly a secular civilization and the religious element, though present, did not dominate the scene,
- 2. During this period, cotton was used for manufacturing textiles in India.

Which of the statements given above is/are correct?

- (a.) 1 only
- (b.) 2 only

- (c.) Both 1 and 2  
(d.) Neither 1 nor 2
20. Which one of the following observations is not true about the Quit India Movement of 1942?  
(a.) It was a non-violent movement  
(b.) It was led by Mahatma Gandhi  
(c.) It was a spontaneous movement  
(d.) It did not attract the labour class in general
21. Consider the following statements regarding Mitakshara Law School  
1. The term Mitakshara is derived from the name of a commentary written by Vijnaneswara, on the Yajnavalkya Smriti.  
2. It is observed in Bengal and Assam.  
Select the correct answer using the code given below:  
(a) 1 only.  
(b) 2 only.  
(c) Both 1 and 2.  
(d) Neither 1 nor 2
22. The function of Pro-Term Speaker is  
(a) To conduct the proceedings in the absence of speaker  
(b) Officiate as speaker when speaker is unlikely to be elected  
(c) Swear in members and hold charge till a regular speaker is elected.  
(d) Checks if the election certificates of the members are in order.
23. Consider the following statements regarding Ramon Magsaysay Award  
1. Ramon Magsaysay Award is featured for six categories, including "Government Service", "Public Service"..etc  
2. The award is internationally recognised as the Nobel Prize counterpart of Asia.  
Select the correct answer using the code given below:  
(a) 1 only.  
(b) 2 only.  
(c) Both 1 and 2.  
(d) Neither 1 nor 2.
24. Among the following, which one is not an ape?  
(a) Gibbon  
(b) Gorilla  
(c) Langur  
(d) Orangutan
25. Which of the following are termed as the privileges of the members of the Parliament?  
1. Freedom of speech in Parliament.  
2. Immunity to a member from any proceedings in any court in respect of anything said or any vote given by him in

- Parliament or any committee thereof.
3. Prohibition on the courts to inquire into proceedings of Parliament.
4. Freedom from arrest in civil cases during, forty days before and after, the parliamentary session.
- Codes:  
(a) 1 and 2  
(b) 1, 2 and 3  
(c) 2, 3 and 4  
(d) 1, 2, 3 and 4
26. In India, if a religious sect/community is given "the status of a national minority, what special advantages it is entitled to?
1. It can establish and administer exclusive educational institutions.
  2. The President of India automatically nominates a representative of the community to Lok Sabha.
  3. It can derive benefits from the Prime Minister's 15-Point Programme.
- Which of the statements given above is/are correct?
- (a.) 1 only  
(b.) 2 and 3 only  
(c.) 1 and 3 only  
(d.) 1, 2 and 3
27. Which one of the following is not a site for in-situ method of conservation of flora?
- (a.) Biosphere Reserve  
(b.) Botanical Garden  
(c.) National Park  
(d.) Wildlife Sanctuary
28. The authorization for the withdrawal of funds from the Consolidated Fund of India must come from:
- (a.) The President of India  
(b.) The Parliament of India  
(c.) The Prime Minister of India  
(d.) The Union Finance Minister
29. Consider the following statements:
1. Biodiversity is normally greater in the lower latitudes as compared to the higher latitudes.
  2. Along the mountain gradients, biodiversity is normally greater in the lower altitudes as compared to the higher altitudes.
- Which of the statements given above is/are correct?
- (a.) 1 only  
(b.) 2 only  
(c.) Both 1 and 2  
(d.) Neither 1 nor 2
30. Consider the following statements regarding Magellanic Clouds
1. They are only visible from Northern Hemisphere
  2. The Magellanic Clouds share a gaseous

- envelope
- Select the correct answer using the code given below:
- (a) 1 only.  
(b) 2 only.  
(c) Both 1 and 2.  
(d) Neither 1 nor 2.
31. All revenues received by the Union. Government by way of taxes and other receipts for the conduct of Government business are credited to the:  
(a.) Contingency Fund of India  
(b.) Public Account  
(c.) Consolidated Fund of India  
(d.) Deposits and Advances Fund
32. Which of the following customs and conventions are associated with Parliament of India?
1. Rulings given by the Chair may be criticized, directly or indirectly, only outside the house.
  2. A member should not give publicity in the press to the discussions held by him with the Speaker in his chamber.
  3. Information given to members in confidence or by virtue of their being members of committees should not be divulged.
  4. A notice should not be given publicity until it has been admitted by the speaker and circulated to members.
- Codes:
- (a) 1, 2 and 3  
(b) 1, 2 and 4  
(c) 2, 3 and 4  
(d) 1, 2, 3 and 4
33. Three of the following criteria have contributed to the recognition of Western Ghats-Sri Lanka and Indo-Burma regions as hotspots of biodiversity:
1. Species richness
  2. Vegetation density
  3. Endemism
  4. Ethno-botanical importance
  5. Threat perception
  6. Adaptation of flora and fauna to warm and humid conditions
- Which three of the above are correct criteria in this context?
- (a.) 1, 2 and 6  
(b.) 2, 4 and 6  
(c.) 1, 3 and 5  
(d.) 3, 4 and 6
34. The "dharma" and "rita" depict a central idea of ancient Vedic civilization of India, In this context, consider the following statements:
1. Dharma was a conception of obligations and of the discharge of one's duties to oneself and to others.
  2. Rita was the fundamental moral law governing the functioning of the universe and all it



- contained.
- Which of the statements given above is/are correct?
- (a.) 1 only  
(b.) 2 only  
(c.) Both 1 and 2  
(d.) Neither 1 nor 2
35. Quit India Movement was launched in response to:
- (a) Cabinet Mission Plan  
(b) Cripps Proposals  
(c) Simon Commission Report  
(d) Wavell Plan
36. Which of the following types of authority are attributed to the President of India?
1. Real and Popular
  2. Titular and de jure
  3. Political and Nominal
  4. Constitutional and Nominal
- Codes:
- (a) 1 and 4  
(b) 2 and 4  
(c) 1 and 3  
(d) 2 and 3
37. Consider the following statements:
1. The Global Ocean Commission grants licences for seabed exploration and mining in international waters.
  2. India has received licences for seabed mineral exploration in international waters.
  3. 'Rare earth minerals' are present on the seafloor in international waters.
- Which of the statements given above are correct?
- (a) 1 and 2 only  
(b) 2 and 3 only  
(c) 1 and 3 only  
(d) 1, 2 and 3
38. Consider the following statements:
1. Climate and Clean Air Coalition (CCAC) to Reduce Short Lived Climate Pollutants is a unique initiative of G20 group of countries.
  2. The CCAC focuses on methane, black carbon and hydrofluorocarbons.
- Which of the statements given above is/are correct?
- (a) 1 only  
(b) 2 only  
(c) Both 1 and 2  
(d) Neither 1 nor 2
39. A member of Parliament can be disqualified on the ground of defection provided
1. he leaves the party as a result of a split in the party along with members who constitute only one-third of the total membership of the party.
  2. a nominated member joins any political party after the expiry of six months from the date on which he takes his seat in the house.

3. he gives up membership of the political party on whose ticket he is elected.
4. he votes or abstains from voting in the house against the direction of his political party without prior permission.

Codes:

- (a) 1 and 2
- (b) 2 and 3
- (c) 3 and 4
- (d) 1 and 4

40. BRIGHT STAR-23 is bilateral exercise between
- (a) India - France
  - (b) India - U.K
  - (c) India - Egypt
  - (d) India - Russia

41. Consider the following statements
1. Celiac Disease attacks and damage the villi in body.
  2. Celiac Disease is caused by an intolerance to gluten
  3. Millets are naturally gluten-free

Select the correct answer using the code given below:

- (a) Only one statement is true.
- (b) Only Two statements are true.
- (c) All three statements are true.
- (d) None of the statements are true.

42. Which of the following characterizes/ characterize the people of Indus Civilization?
1. They possessed great palaces and temples.
  2. They worshipped both male and female deities.
  3. They employed horse-drawn chariots in warfare.

Select the correct statement/ statements using the codes given below.

- (a) 1 and 2 only
- (b) 2 only
- (c) 1, 2 and 3
- (d) None of the statements given above is correct

43. Marrakech which is recently seen in news is located in
- (a) Ukraine
  - (b) Iran
  - (c) Morocco
  - (d) Russia

44. Consider the following statements regarding Phanigiri artefacts
1. Phanigiri artefacts shows both Mahayana and Hinayana schools of thought.
  2. It is located in the state of Andhra Pradesh.

Select the correct answer using the code given below:

- (a) 1 only.
- (b) 2 only.
- (c) Both 1 and 2.
- (d) Neither 1 nor 2.

45. Consider the following statements

1. Sago manufactured from the wet starch powder crushed from tapioca roots.
2. Tapioca is a horticulture crop.
3. Recently Salem Sago gets GI tag.

Select the correct answer using the code given below:

- (a) Only one statement is true.
- (b) Only Two statements are true.
- (c) All three statements are true.
- (d) None of the statements are true.

46. Which amongst the following provided a common factor for tribal insurrection in India in the 19th century?

- (a.) Introduction of a new system of land revenue and taxation- of tribal products
- (b.) Influence of foreign religious missionaries in tribal areas
- (c.) Rise of a large number of money lenders, traders and revenue farmers as middlemen in tribal areas
- (d.) The complete disruption of the old agrarian order of the tribal communities

47. D. Ering Wildlife Sanctuary which is recently seen in news located in \

- (a) Assam
- (b) Meghalaya
- (c) Uttarakhand

(d) Arunachal Pradesh

48. With reference to 'Indian Ocean Dipole (IOD)' sometimes mentioned in the news while forecasting Indian monsoon, which of the following statements is/are correct?

1. IOD phenomenon is characterised by a difference in sea surface temperature between tropical Western Indian Ocean and tropical Eastern Pacific Ocean.
2. An IOD phenomenon can influence an El Nino's impact on the monsoon.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

49. The demand for the Tebhaga Peasant Movement in Bengal was for:

- (a) the reduction of the share of the landlords from one-half of the crop to one-third
- (b) the grant of ownership of land to peasants as they were the actual cultivators of the land
- (c) the uprooting of Zamindari system and the end of serfdom
- (d) writing off all peasant debts

50. VARUNA is a bilateral naval exercise between

- (a) India - U.K

- (b) India - U.S.A
- (c) India - France
- (d) India - Indonesia

51. Mudu Konaje site is located in
- (a) Karnataka
  - (b) Andra Pradesh
  - (c) Tamil Nadu
  - (d) Orissa
52. When the annual Union Budget is not passed by the Lok Sabha
- (a.) the Budget is modified and presented again
  - (b.) the Budget is referred to the Rajya Sabha for suggestions
  - (c.) the Union Finance Minister is asked to resign,
  - (d.) the Prime Minister submits the resignation of Council of Ministers
53. Consider the following statements
1. Both Zika and Dengue have similarities in terms of symptoms
  2. Sexual transmission of Zika virus disease is possible.
- which of the following statements are correct?
- (a) 1 only
  - (b) 2 only
  - (c) Both 1 and 2
  - (d) Neither 1 nor 2

54.

Antibody	Functions
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1. IgG	Main antibody in blood and it has a powerful ability to bind to bacteria
2. IgM	It is present on the surface of B cells and it is reported to play a role in the induction of antibody production

Which of the following pairs are true?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

55. Two important rivers — one with its source in Jharkhand (and known by a different name in Odisha), and another, with its source in Odisha — merge at a place only a short distance from the coast of Bay of Bengal before flowing into the sea. This is an important site of wildlife and biodiversity and a protected area.
- Which one of the following could be this?
- (a.) Bhitarkanika
  - (b.) Chandipur-on-sea
  - (c.) Gopalpur-on-sea
  - (d.) Simlipal

56.

1. It is native to Manipur
2. Longpi Pottery is practiced by the

- Tangkhul Naga tribes.  
Which of the above statements are true?  
(a) 1 Only  
(b) 2 Only  
(c) Both 1 and 2  
(d) Neither 1 nor 2
57. Consider the following statements regarding *Dinkinesh asteroid*
1. It is an S-type asteroid.
  2. Dinkinesh is a slow rotator with a moderately large light-curve amplitude.
- Which of the above statements are true?  
(a) 1 Only  
(b) 2 Only  
(c) Both 1 and 2  
(d) Neither 1 nor 2
58. Consider the following statements regarding Stem cells
1. It can be derived from mammals only
  2. Stem cells can be used for screening new drugs
  3. It can be used for medical therapies
- Select the correct answer using the codes given below:  
(a) Only one statement is true.  
(b) Only two statements are true.  
(c) All three statements are true.  
(d) None of the statements are true.
59. The religion of early Vedic Aryans was primarily of  
(a) Bhakti  
(b) image worship and Yajnas  
(c) worship of nature and Yajnas  
(d) worship of nature and Bhakti
60. Increase in absolute and per capita real GNP do not connote a higher level of economic development, if:  
(a) Industrial output fails to keep pace with agricultural output.  
(b) Agricultural output fails to keep pace with industrial output.  
(c) Poverty and unemployment increase.  
(d) Imports grow faster than exports.
61. Consider the following statements regarding Lucy Mission
1. It was launched by ESA
  2. It aims to take close observations of nine of Jupiter's Trojans
  3. It is the first spacecraft sent to study the Trojan asteroids
- Select the correct answer using the codes given below:  
(a) Only one statement is true.  
(b) Only two statements are true.  
(c) All three statements are true.  
(d) None of the statements are true.

62. Consider the following statements regarding Metal Ambabari Craft
1. It is native to Rajasthan.
  2. It is curated by the Bhil & Patelia Tribe
- Select the correct answer using the codes given below:
- (a) 1 only
  - (b) 2 only
  - (c) Both 1 and 2
  - (d) Neither 1 nor 2
63. The people of India agitated against the arrival of Simon Commission because:
- (a) Indians never wanted the review of the working of the Act of 1919
  - (b) Simon Commission recommended the abolition of Dyarchy (Diarchy) in the Provinces
  - (c) there was no Indian member in the Simon Commission
  - (d) the Simon Commission suggested the partition of the country
64. In a given year in India, official poverty lines are higher in some States than in others because:
- (a) Poverty rates vary from State to State
  - (b) Price levels vary from State to State
  - (c) Gross State Product varies from State to State
  - (d) Quality of public distribution varies from State to State
65. Consider the following statements regarding *Bandipur Tiger Reserve*
1. It is located at the tri-junction area of the States of Karnataka, Tamil Nadu and Kerala.
  2. Geographically, it is an "ecological confluence" of the Western and Eastern Ghats.
  3. Bandipur has a typical tropical climate with distinct wet and dry seasons.
- Which of the above statements are true ?
- (a) Only one statement is true.
  - (b) Only two statements are true.
  - (c) All three statements are true.
  - (d) None of the statements are true.
66. Consider the following statements regarding *MotoGP*
1. It is a non-stop race from start to finish, without any pit stops.
  2. The MotoGP world championship is contested with 1000 cc prototypes.
- Which of the above statements are true ?
- (a) 1 Only
  - (b) 2 Only.
  - (c) Both 1 and 2.
  - (d) Neither 1 nor 2.
67. Under the Constitution of India, which one of the following is not

- a fundamental duty?  
(a.) To vote in public elections  
(b.) To develop the scientific temper  
(c.) To safeguard public property  
(d.) To abide by me Constitution and respect its ideals
68. The black cotton soil of India has been formed due to the weathering of  
(a) brown forest soil  
(b) fissure volcanic rock  
(c) granite and schist  
(d) shale and limestone
69. Bhoj wetland is located in  
(a) Madhya Pradesh.  
(b) Maharashtra  
(c) Gujarat  
(d) Rajasthan
70. Consider the following statements regarding *Cirrus Clouds*
1. They are delicate, feathery clouds that are made mostly of ice crystals.
  2. The bottom of Cirrus clouds are fairly close to the ground.
- Which of the above statements are true ?  
(a) 1 Only  
(b) 2 Only.  
(c) Both 1 and 2.  
(d) Neither 1 nor 2.
71. With reference to the Finance Commission of India, which of the following statements is correct?  
(a.) It encourages the inflow of foreign capital for infrastructure development  
(b.) It facilitates the proper distribution of finances among the Public Sector Undertakings  
(c.) It ensures transparency in financial administration  
(d.) None of the statements (a), (b) and (c) given above is correct in this context
72. How many of the following are considered Critical Minerals in India?  
1. Rhenium  
2. Graphite  
3. Potash  
4. Tungsten  
How many of the above are correct?  
A) Only 1  
B) Only 2  
C) Only 3  
D) All Four
73. Which of the following are considered as planetary boundaries ?  
1. Climate Change  
2. Biosphere integrity  
3. Freshwater change  
4. Land system change  
(a) 1, 2 and 3.  
(b) 2, 3 and 4.  
(c) 1, 2 and 4.  
(d) 1, 2, 3 and 4.

74. If a major solar storm (solar flare) reaches the Earth, which of the following are the possible effects on the Earth?

1. GPS and navigation systems could fail.
2. Tsunamis could occur at equatorial regions.
3. Power grids could be damaged.
4. Intense auroras could occur over much of the Earth.
5. Forest fires could take place over much of the planet.
6. Orbits of the satellites could be disturbed.
7. Shortwave radio communication of the aircraft flying over polar regions could be interrupted.

Select the correct answer using the code given below:

- (a) 1, 2, 4 and 5 only
- (b) 2, 3, 5, 6 and 7 only
- (c) 1, 3, 4, 6 and 7 only
- (d) 1, 2, 3, 4, 5, 6 and 7

75. A sandy and saline area is the natural habitat of an Indian animal species. The animal has no predators in that area but its existence is threatened due to the destruction of its habitat. Which one of the following could be that animal?

- (a.) Indian wild buffalo
- (b.) Indian wild ass
- (c.) Indian wild boar
- (d.) Indian gazelle

76. With reference to 'Eco-Sensitive Zones', which of the following statements is/are correct?

1. Eco-Sensitive Zones are the areas that are declared under the Wildlife (Protection) Act, 1972.
2. The purpose of the declaration of Eco-Sensitive Zones is to prohibit all kinds of human activities, in those zones except agriculture.

Select the correct answer using the code given below.

1. 1 only
2. 2 only
3. Both 1 and 2
4. Neither 1 nor 2

77. A state in India has the following characteristics:

1. Its northern part is arid and semi-arid.
2. Its central part produces cotton.
3. Cultivation of cash crops is predominant over food crops.

Which one of the following states has all of the above characteristics?

- (a) Andhra Pradesh
- (b) Gujarat
- (c) Karnataka
- (d) Tamil Nadu

78. The national motto of India, 'Satyameva Jayate' inscribed



below the Emblem of India is taken from

- (a) Katha Upanishad
- (b) Chandogya Upanishad
- (c) Aitareya Upanishad
- (d) Mundaka Upanishad

79. Gresham's law which is recently seen in news related to
- (a) based on the observations from monohybrid crosses.
  - (b) relationship between electric current and potential difference
  - (c) is a monetary principle
  - (d) calculating the relative strengths of military forces.

80. Consider the following statements regarding Western Disturbance

- 1. The Western Disturbance traditionally brings vital moisture from European seas.
- 2. Western disturbance persist late into the summer, complicating the transition to the Southwest Monsoon season.

Which of the above statements are true?

- (a) 1 Only
- (b) 2 Only.
- (c) Both 1 and 2.
- (d) Neither 1 nor 2.

81. La Nina is suspected to have caused recent floods in Australia. How is La Nina different from El Nino?

- 1. La Nina is characterised by an usually cold ocean temperature in equatorial Indian Ocean whereas El Nino is characterised by unusually warm ocean temperature in the equatorial Pacific Ocean.
- 2. El Nino has adverse effect on south-west monsoon of India but La Nina has no effect on monsoon climate.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

82. Derna which is recently seen in news located in

- (a) Ukraine
- (b) Morocco
- (c) Libya
- (d) China

83. Which one of the following objectives is not embodied in the Preamble to the Constitution of India?

- (a) Liberty of thought
- (b) Economic liberty
- (c) Liberty of expression
- (d) Liberty of belief

84. Consider the following statements regarding Meenakari handicraft

- 1. It involves colouring the

surface of metals by fusing different colours.

2. It is practised in the by lanes of Varanasi
3. It was introduced by the Mughals

Which of the above statements are true?

- (a) Only one statement is true.
- (b) Only two statements are true.
- (c) All three statements are true.
- (d) None of the statements are true.

85. Mahatma Gandhi said that some of his deepest convictions were reflected in a book titled, "Unto this Last" and the book transformed his life. What was the message from the book that transformed Mahatma Gandhi?
- (a.) Uplifting the oppressed and poor is the moral responsibility of an educated man
  - (b.) The good of individual is contained in the good of all
  - (c.) The life of celibacy and spiritual pursuit are essential for a noble life
  - (d.) All the statements (a), (b) and (c) are correct in this context

86. Consider the following statements regarding Alzheimer's Disease
1. Alzheimer's Disease aligns with characteristics of ferroptosis.
  2. It also reduce the activity of the antioxidant

enzyme glutathione peroxidase 4 (GPX4).

Which of the above statements are true?

- (a) 1 Only
- (b) 2 Only.
- (c) Both 1 and 2.
- (d) Neither 1 nor 2.

87. Consider the following statements regarding Cash Reserve Ratio

1. It is the percentage of cash required to be kept in reserves as against the bank's total deposits
2. All banks in India, except Regional Rural Banks and Local Area Banks, have to deposit the CRR money to RBI.

Which of the above statements are true?

- (a) 1 Only
- (b) 2 Only.
- (c) Both 1 and 2.
- (d) Neither 1 nor 2.

88. Consider the following statements regarding Rosh Hashanah

1. Rosh Hashanah is observed on the first and second days of the Jewish month of Tishrei
2. It's primary significance is welcoming the arrival of spring

Which of the above statements are true?

- (a) 1 Only
- (b) 2 Only.

- (c) Both 1 and 2.
- (d) Neither 1 nor 2.

89. Eastern Maritime Corridor is a proposed sea route between
- (a) Mumbai, India, and St. Petersburg, Russia
  - (b) Chennai, India, and Vladivostok, Russia
  - (c) Chennai, India, and St. Petersburg, Russia
  - (d) Mumbai, India, and Vladivostok, Russia

90. Recently ecologists work to protect sevengill sharks, Consider the following statements regarding *Broadnose Sevengill Shark*

1. It is found only in Mediterranean Sea.
2. It is classified as Vulnerable in IUCN Red List.

Which of the above statements are true?

- (a) 1 Only
- (b) 2 Only.
- (c) Both 1 and 2.
- (d) Neither 1 nor 2.

91. Consider the following statements regarding *Pralay ballistic missiles*

1. It is a quasi-ballistic surface-to-surface missile.
2. It can hit targets 150-500 km away.
3. It is powered by a solid propellant rocket motor

Which of the above statements are true?

- (a) Only one statement is true.
- (b) Only two statements are true.
- (c) All three statements are true.
- (d) None of the statements are true.

92. Recently Santiniketan added to UNESCO World Heritage List, It is located in

- (a) Karnataka
- (b) Uttar Pradesh
- (c) West Bengal
- (d) Maharashtra

93. String Technology used in the production of

- (a) Methane
- (b) Oil
- (c) Lithium
- (d) Superconductors

94. Tungareashwar Wildlife Sanctuary is located in

- (a) Andhra Pradesh
- (b) Karnataka
- (c) Maharashtra
- (d) Madhya Pradesh

95. Consider the following statements regarding Indian Coast Guard

1. Indian Coast Guard has jurisdiction over contiguous zone and exclusive economic zone.
2. It operates under the Ministry of Defence.

- which of the following statements are true ?
- (a) 1 only  
(b) 2 only  
(c) Both 1 and 2  
(d) Neither 1 nor 2
96. Shola National Park Which is recently seen in news is located in
- (a) Maharashtra  
(b) Karnataka  
(c) Tamil Nadu  
(d) Kerala
97. Which one of the following objectives is not embodied in the Preamble to the Constitution of India?
- (a) Liberty of thought  
(b) Economic liberty  
(c) Liberty of expression  
(d) Liberty of belief
98. Which of the following are the reasons for the occurrence of multi-drug resistance in microbial pathogens in India?
1. Genetic predisposition of some people
  2. Taking incorrect doses of antibiotics to cure diseases
  3. Using antibiotics in livestock farming
  4. Multiple chronic diseases in some people
- Select the correct answer using the code given below.
- (a) 1 and 2  
(b) 2 and 3 only  
(c) 1, 3 and 4  
(d) 2, 3 and 4
99. The Narmada River flows to the west, while most other large peninsular rivers flow to the east. Why?
1. It occupies a linear rift valley.
  2. It flows between the Vindhyas and the Satpuras.
  3. The land slopes to the west from Central India.
- Select the correct answer using the codes given below:
- (a) 1 only  
(b) 2 and 3  
(c) 1 and 3  
(d) None
100. In India, other than ensuring that public funds are used efficiently and for intended purpose, what is the importance of the office of the Comptroller and Auditor General (CAG)?
1. CAG exercises exchequer control on behalf of the Parliament when the President of India declares national emergency/financial emergency.
  2. CAG reports on the execution of projects or programmes by the ministries are discussed by the Public Accounts Committee.
  3. Information from CAG reports can be used by investigating agencies to

press charges against those who have violated the law while managing public finances.

4. While dealing with the audit and accounting of government companies, CAG has certain judicial powers for prosecuting those who violate the law.

Which of the statements given above is/are correct?

- (a) 1, 3 and 4 only  
(b) 2 only  
(c) 2 and 3 only  
(d) 1, 2, 3 and 4

101. Consider the following statements regarding Vanadium

1. It exhibits good corrosion resistance against alkalis and acids.
2. It is a Soft Metal.

Which of the above statements are true ?

- (a) 1 only  
(b) 2 only  
(c) Both 1 and 2  
(d) Neither 1 nor 2

102. Consider the following statements regarding gulf of Khambhat.

1. It is an inlet of the Arabian Sea
2. Mahi and Sabarmati rivers drain into it.

Which of the above statements are true ?

- (a) 1 only  
(b) 2 only

- (c) Both 1 and 2  
(d) Neither 1 nor 2

103. Consider the following statements regarding Hoysala Architecture

1. They are known for its distinctive blend of Bhumija style prevalent in Central India.
2. Key Elements of Hoysala Architecture are Mantapa, Vimana and Sculpture.
3. They are made out of soapstone

Which of the above statements are true ?

- (a) Only one statement is true.  
(b) Only two statements are true.  
(c) All three statements are true.  
(d) None of the statements are true.

104. The Nagara, the Dravida and the Vesara are the

- (a) three main racial groups of the Indian subcontinent  
(b) three main linguistic divisions into which the languages of India can be classified  
(c) three main styles of Indian temple architecture  
(d) three main musical Gharanas prevalent in India

105. Consider the following statements regarding SHREYAS Scheme

1. It is an umbrella

scheme, under the Ministry of Social Justice & Empowerment.

2. SHREYAS aims for the Educational Empowerment of OBC & Economically Backward Class (EBC)

Which of the above statements are true ?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

106. For outstanding contribution to which one of the following fields is Shanti Swarup Bhatnagar Prize given?

- (a) Literature
- (b) Performing Arts
- (c) Science
- (d) Social Service

107. Consider the following statements :

DNA Barcoding can be a tool to:

1. assess the age of a plant or animal.
2. distinguish among species that look alike.
3. identify undesirable animal or plant materials in processed foods.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 3 only
- (c) 1 and 2
- (d) 2 and 3

108. With the present state of development, Artificial Intelligence can effectively do which of the following?

1. Bring down electricity consumption in industrial units
2. Create meaningful short stories and songs
3. Disease diagnosis
4. Text-to-Speech Conversion
5. Wireless transmission of electrical energy

Select the correct answer using the code given below:

- (a) 1, 2, 3 and 5 only
- (b) 1, 3 and 4 only
- (c) 2, 4 and 5 only
- (d) 1, 2, 3, 4 and 5

109. Which of the following can aid in furthering the Government's objective of inclusive growth?

1. Promoting Self-Help Groups
2. Promoting Micro, Small, and Medium Enterprises
3. Implementing the Right to Education Act

Select the correct answer using the codes given below:

- (a) 1 only
- (b) 1 and 2 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

110. With reference to Indian elephants, consider the following statements:

1. The leader of an elephant group is a

female.

2. The maximum gestation period can be 22 months.
3. An elephant can normally go on calving till the age of 40 years only.
4. Among the States in India, the highest elephant population is in Kerala.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 and 4 only
- (c) 3 only
- (d) 1, 3 and 4 only

111. VB\_HmeY\_H4907 which is recently seen in news refers to
- (a) Bacteria
  - (b) Virus
  - (c) Asteroid
  - (d) Comet

112. Consider the following statements regarding *Foot and Mouth Disease*

1. It is a viral disease.
2. It can be transmitted to humans.

Which of the above statements are true ?

- (a) 1 Only
- (b) 2 Only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

113. Consider the following statements regarding *Shore*

*Temple*

1. It is located in Tamil Nadu.
2. It is dedicated to both Lord Shiva and Lord Vishnu.
3. It is collectively designated as UNESCO World Heritage site in 1984.

Which of the above statements are true ?

- (a) Only one statement is true.
- (b) Only two statements are true.
- (c) All three statements are true.
- (d) None of the statements are true.

114. Veerangana Durgavati Tiger Reserve which is recently seen in news located in
- (a) Gujarat.
  - (b) Uttar Pradesh.
  - (c) Maharashtra.
  - (d) Madhya Pradesh.

115. Consider the following statements regarding *Fatehpur Sikri*

1. It is located in Uttar Pradesh.
2. It was founded by the Mughal emperor Akbar.
3. It was designated a UNESCO World Heritage site.

Which of the above statements are true ?

- (a) Only one statement is true.
- (b) Only two statements are true.

- (c) All three statements are true.  
(d) None of the statements are true.
116. Which of the following languages are considered to be sub-group of Indo-European family?
1. Hindi
  2. Bengali
  3. Persian
- (a) 1 and 2.  
(b) 2 Only  
(c) 3 Only  
(d) 1, 2 and 3.
117. Consider the following statements regarding *Free Movement Regime*
1. Under the FMR, all the hill tribes, whether they are citizens of India or Myanmar, can travel within 8 km on either side of the Indo-Myanmar Border.
  2. They can cross the border by producing a border pass with a one-year validity
  3. Assam Rifles is tasked with guarding the IMB.
- Which of the above statements are true ?
- (a) Only one statement is true.  
(b) Only two statements are true.  
(c) All three statements are true.  
(d) None of the statements are true.
118. Consider the following statements regarding *Bolson tortoises*
1. It is native to the India\*\*.\*\*
  2. It is classified as Critically Endangered in IUCN Red list.
- Which of the above statements are true ?
- (a) 1 Only  
(b) 2 Only  
(c) Both 1 and 2  
(d) Neither 1 nor 2
119. *Mt. Semeru volcano is located in*
- (a) Indonesia  
(b) Philippines  
(c) New Zealand  
(d) Japan
120. Which of the following is/are not a member/s of *Asia Pacific Forum* ?
- (a) India  
(b) Pakistan  
(c) Australia  
(d) Bangladesh
121. Consider the following statements
1. He amalgamated the ideologies of 'Advaita Vedanta'
  2. He established four monastic seats in the four corners of India
  3. He also founded 'Dashanami Sampradaya'
- Who was the above mentioned



- one ?
- (a) Ramaujacharya  
(b) Madhavacharya  
(c) Bhaskaracharya  
(d) Shankaracharya
122. Consider the following statements regarding Juno
1. Juno is a solar-powered NASA spacecraft
  2. It is looping orbits around planet Saturn.
- Which of the above statements are true ?
- (a) 1 Only  
(b) 2 Only  
(c) Both 1 and 2  
(d) Neither 1 nor 2
123. Consider the following statements regarding *Advaita Vedanta*
1. It refers to the non-dualistic school of Hindu philosophy
  2. It is derived mostly from the Upanishads
  3. Advaita Vedanta teaches that the world is ultimately an illusion
- Which of the above statements are true ?
- (a) Only one statement is true.  
(b) Only two statements are true.  
(c) All three statements are true.  
(d) None of the statements are true.
124. Dudhwa Tiger Reserve which is recently seen in news located in
- (a) Gujarat.  
(b) Uttar Pradesh.  
(c) Maharashtra.  
(d) Madhya Pradesh.
125. Consider the following statements regarding L.69 grouping
1. It is a pro-reform grouping that includes developing countries from Africa, Latin America and the Caribbean, Asia and the Pacific.
  2. India is a leading country in L.69
- Which of the above statements are true ?
- (a) 1 Only  
(b) 2 Only  
(c) Both 1 and 2  
(d) Neither 1 nor 2
126. Consider the following statements regarding Psyche asteroid
1. It is composed primarily of iron-nickel metal.
  2. The asteroid orbits the Sun between Mars and Jupiter.
- Which of the above statements are true?
- (a) 1 Only  
(b) 2 Only  
(c) Both 1 and 2  
(d) Neither 1 nor 2
127. Consider the following statements regarding Circular

RNA

1. Circular RNA can be captured from HIV-1-infected T cells.
2. It plays a pivotal role in regulating gene expression

Which of the above statements are true?

- (a) 1 Only
- (b) 2 Only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

128. Mukurthi National Park is located in

- (a) Tamil Nadu
- (b) Kerala
- (c) Karnataka
- (d) Andhra Pradesh

129. Which of the following statements are correct regarding Galactic tides

1. They can reshape a galaxy structure
2. They disrupt the orbits of stars
3. Galactic tides affect the supermassive black holes
4. They caused by gravitational forces within a galaxy

- (a) 1, 2 and 3
- (b) 2 Only
- (c) 2 and 4
- (d) 1, 2, 3 and 4

130. Consider the following statements:

1. Aadhaar card can be used as a proof of citizenship or domicile.
2. Once issued, Aadhaar number cannot be deactivated or omitted by the Issuing Authority.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

131. Foreign Contribution is delivery or transfer made by any foreign source of any:

1. Article
2. Currency
3. Security

- (a) 1 and 2
- (b) 2 and 3
- (c) 1 and 3
- (d) 1, 2 and 3

132. Consider the following statements regarding microRNA

1. MicroRNAs (miRNAs) are a class of non-coding RNAs
2. They are larger than messenger RNAs
3. Molecules of miRNA are found in cells and in the bloodstream.

Which of the above statements are true?

- (a) Only one statement is true.
- (b) Only two statements are true.
- (c) All three statements are true.
- (d) None of the statements are

- true.
133. Chincholi Wildlife Sanctuary is located in  
(a) Maharashtra  
(b) Telangana  
(c) Andhra Pradesh  
(d) Karnataka
134. Norman E. Borlaug Award is presented to honor  
(a) Medicine  
(b) Journalism  
(c) Agriculture and food production.  
(d) Sports
135. Consider the following statements:  
1. Animal Welfare Board of India is established under the Environment (Protection) Act, 1986.  
2. National Tiger Conservation Authority is a statutory body.  
3. National Ganga River Basin Authority is chaired by the Prime Minister.
- Which of the statements given above is/are correct?  
(a) 1 only  
(b) 2 and 3 only  
(c) 2 only  
(d) 1, 2 and 3
136. Consider the following statements regarding Toto Language

1. It is a Sino-Tibetan language
  2. Toto is considered a critically endangered language by UNESCO
- Which of the above statements are true?  
(a) 1 Only  
(b) 2 Only  
(c) Both 1 and 2  
(d) Neither 1 nor 2
137. Consider the following statements regarding Gems and Jewellery Export Promotion Council (GJEPC)
1. It is sponsored by the Ministry of Commerce & Industry
  2. GJEPC is primarily involved in introducing Indian gem and jewellery products to the international market and promotes their exports.
- Which of the above statements are true?  
(a) 1 Only  
(b) 2 Only  
(c) Both 1 and 2  
(d) Neither 1 nor 2
138. Consider the following statements regarding *Angiostrongylus cantonensis*
1. It is a parasitic nematode
  2. *Angiostrongylus cantonensis* can infect humans
  3. Currently there is no specific treatment for

- this parasite.  
Which of the above statements are true?  
(a) Only one statement is true.  
(b) Only two statements are true.  
(c) All three statements are true.  
(d) None of the statements are true.
139. *Kamlang Tiger Reserve which is recently seen in news located in*  
(a) Madhya Pradesh  
(b) Assam  
(c) Arunachal Pradesh  
(d) Uttarakhand
140. Other than resistance to pests, what are the prospects for which genetically engineered plants have been created?  
1. To enable them to withstand drought  
2. To increase the nutritive value of the produce  
3. To enable them to grow and do photosynthesis in spaceships and space stations  
4. To increase their shelf life  
Select the correct answer using the codes given below:  
(a) 1 and 2 only  
(b) 3 and 4 only  
(c) 1, 2 and 4 only  
(d) 1, 2, 3 and 4
141. The increasing amount of carbon dioxide in the air is slowly raising the temperature of the atmosphere, because it absorbs  
(a) the water vapour of the air and retains its heat  
(b) the UV part of the solar radiation  
(c) all the solar radiations  
(d) the infrared part of the solar radiation
142. Which one of the following is the characteristic climate of the Tropical Savannah Region?  
(a) Rainfall throughout the year  
(b) Rainfall in winter only  
(c) An extremely short dry season  
(d) A definite dry and wet season
143. The religion of early Vedic Aryans was primarily of  
(a) Bhakti  
(b) image worship and Yajnas  
(c) worship of nature and Yajnas  
(d) worship of nature and Bhakti
144. Consider the following statements about Gem and Jewellery Export Promotion Council:  
1. The GJEPC was established in 1966 by the Ministry of Micro, Small and Medium Enterprises.  
2. it was one of several Export Promotion Councils started by the Government.  
3. It has its headquarters in Surat and Regional

- Offices in New Delhi, Kolkata, Chennai, Mumbai and Jaipur. Select the incorrect answers using the code given below:
- (a) 1 and 2.  
(b) 2 and 3.  
(c) 1 and 3.  
(d) 1, 2 and 3.
145. Kazan is a city in southwest Russia, on the banks of the Volga and Kazanka rivers. The capital of the Republic of Tatarstan, a semi-autonomous region, it's known for the centuries-old Kazan Kremlin is located where?
- (a) South-west of Moscow.  
(b) North-east of Moscow.  
(c) East of Moscow.  
(d) South of Moscow.
146. Consider the following statements about Lagrange points:
1. L4, and L5 points are unstable, therefore, satellites orbiting these points need regular course corrections to maintain their positions.
  2. L2 is Positioned behind the Sun, opposite Earth, and just beyond Earth's orbit, it offers potential observations of the far side of the Sun.
- Select the correct answers using the code given below:
- (a) 1 only.  
(b) 2 only.  
(c) Both 1 and 2.  
(d) Neither 1 nor 2
147. What is Cas9 protein that is often mentioned in news?
- (a) A molecular scissors used in targeted gene editing  
(b) A biosensor used in the accurate detection of pathogens in patients  
(c) A gene that makes plants pest-resistant  
(d) An herbicidal substance synthesized in genetically modified crops
148. Which one of the following was a very important seaport in the Kakatiya kingdom?
- (a) Kakinada  
(b) Motupalli  
(c) Machilipatnam  
(d) Nelluru
149. In the Constitution of India, promotion of international peace and security is included in the
- (a) Preamble to the Constitution  
(b) Directive Principles of State Policy  
(c) Fundamental Duties  
(d) Ninth Schedule
150. The seasonal reversal of winds is the typical characteristic of
- (a) Equatorial climate  
(b) Mediterranean climate  
(c) Monsoon climate

(d) All of the above climates

**ANSWERS**

1.	a	
2.	c	<p><b>Over 260 detained during Tripura students' strike demanding Roman script for Kokborok</b></p> <p><i>Kokborok Language</i></p> <ul style="list-style-type: none"> <li>• Kokborok is the language spoken by <b>the Borok people</b> belonging to the <b>State of Tripura</b>.</li> <li>• The term kok means "verbal", and borok means "people" or "human".</li> <li>• It is a Sino-Tibetan language and can be traced back to at least the 1st century AD when the historical record of Tripuri kings started to be written down in a book called the <b>Rajratnakar</b>.</li> <li>• The dialect belongs to the <b>Tibeto-Burman group of languages</b>, and its root can be traced to the Sino-Tibetan speech family.</li> <li>• Kokborok got the written form in the year 1897 as <b>Doulot Ahammad</b>, a Muslim scholar, wrote the first Kokborok Grammar named “ <b>KOKBOROMA ANG TRIPURA – VYAKARAN GRAMMAR.</b>”</li> <li>• It is <b>one of the state languages</b> of Tripura, notified on January 19, 1979.</li> </ul>
3.	b	<p><b>Villagers stunned by rare sighting of Asiatic Wild Dog (Dhole) pack in Theerthahalli</b></p> <p><i>Asiatic Wild Dog (Dhole)</i></p> <ul style="list-style-type: none"> <li>• It is a <b>wild canid</b> found in the <b>forests of central, south, and southeast Asia</b>.</li> <li>• <b>Scientific Name: Cuon alpinus</b></li> <li>• <b>Other Names: Indian wild dog, whistling dog, red wolf, red dog and mountain wolf.</b></li> <li>• <b>Distribution:</b> <ul style="list-style-type: none"> <li>○ They are found throughout <b>Eastern and Southeastern Asia</b>.</li> <li>○ They can be <b>seen as far north as Siberia</b>, as far <b>south as some Malaysian islands</b>, and as far <b>west as the Indian peninsula</b>.</li> <li>○ They are <b>found in three clusters across India</b>, namely the <b>Western and Eastern Ghats</b>, the <b>central Indian landscape and North East India</b>. The Western and Eastern Ghats is a stronghold region for dholes.</li> </ul> </li> <li>• <b>Habitat:</b> Dholes are animals that <b>inhabit dense jungles, steppes, mountains, scrub forests, and pine forests</b>.</li> </ul>

		<ul style="list-style-type: none"> <li>● <b>Features:</b> <ul style="list-style-type: none"> <li>○ Its <b>length ranges between 76 and 100 cm</b> (30 and 40 inches), exclusive of the <b>28–48-centimetre (11–19-inch) tail</b>, and its <b>weight is from 14 to 21 kg</b>.</li> <li>○ They <b>vary in colour from charcoal grey to rust red to sandy beige</b>, depending on their habitat.</li> <li>○ Their <b>tail is brushy and fox-like, often with a black tip</b>.</li> <li>○ They do have <b>lighter colouration along their chest, belly, and paws</b>.</li> <li>○ Dholes are <b>highly social animals</b>, and they frequently <b>hunt in packs of 5 to 12</b>. These <b>clans may grow to as many as 30 or 40 members</b>.</li> </ul> </li> <li>● <b>Conservation status:</b> <ul style="list-style-type: none"> <li>○ <b>IUCN Red List: Endangered</b></li> <li>○ <b>The Wildlife Protection Act 1972: Schedule II</b></li> <li>○ <b>CITES: Appendix II</b></li> </ul> </li> </ul>
4.	b	
5.	b	
6.	b	<p><i>Kylinxia zhangi</i></p> <ul style="list-style-type: none"> <li>● It is an <b>extinct arthropod that lived in the early Cambrian period</b>, about <b>520 million years ago</b>.</li> <li>● <b>The fossil of the species was uncovered near the town of Chengjiang in the Yunan Province of southern China</b>.</li> <li>● <b>Kylinxia is among the 250 or so extremely well-preserved fossil animals described from the region</b>, which are together known as <b>Cambrian Chengjiang biota</b>.</li> <li>● <b>Features:</b> <ul style="list-style-type: none"> <li>○ It had a <b>segmented body with a head, thorax, and abdomen</b>.</li> <li>○ <b>Kylinxia sported three eyes on its head</b>, along with a <b>pair of fearsome claws</b> that was possibly used to catch prey.</li> <li>○ It had a <b>fused head shield, a segmented trunk, and jointed legs</b>.</li> <li>○ The creature had a <b>head with six segments, which is similar to modern insects</b>.</li> </ul> </li> </ul> <p><i>Arthropods</i></p> <ul style="list-style-type: none"> <li>● They are <b>invertebrates with jointed legs</b>.</li> <li>● They <b>make up about 75% of all animals on Earth</b>.</li> <li>● They <b>can be found in almost every habitat on Earth</b>, from</li> </ul>



		<p>deep-sea hydrothermal vents to the highest mountains.</p> <ul style="list-style-type: none"> <li>• Arthropods are <b>divided into four major groups</b>: <ul style="list-style-type: none"> <li>○ <b>insects</b>;</li> <li>○ <b>myriapods</b> (including centipedes and millipedes);</li> <li>○ <b>arachnids</b> (including spiders, mites and scorpions);</li> <li>○ <b>crustaceans</b> (including slaters, prawns and crabs).</li> </ul> </li> <li>• They are characterised by <b>several key features</b>: <ul style="list-style-type: none"> <li>○ <b>Exoskeleton</b>: Arthropods have a <b>hard exoskeleton made of chitin</b>, a complex sugar. This exoskeleton <b>serves as both protection and structural support</b> for their bodies.</li> <li>○ <b>Segmented Bodies</b>: They have <b>segmented bodies, which are divided into distinct regions</b>, including the head, thorax, and abdomen in insects. This segmentation <b>allows for flexibility and specialisation of body parts</b>.</li> <li>○ <b>Jointed Appendages</b>: Arthropods have jointed appendages (legs, antennae, claws, etc.) <b>that are attached to their body segments</b>.</li> <li>○ <b>Bilateral Symmetry</b>: They <b>exhibit bilateral symmetry</b>, meaning their <b>bodies are symmetrical on both sides when divided</b> along a central axis.</li> <li>○ <b>Open Circulatory System</b>: Arthropods typically have an open circulatory system <b>in which blood-like fluid called hemolymph circulates in body cavities and directly bathes the internal organs</b>.</li> </ul> </li> </ul>
7.	b	
8.	a	<ul style="list-style-type: none"> <li>• The Codex Alimentarius, or “Food Code“ is a collection of standards, guidelines and codes of practice adopted by the Codex Alimentarius Commission.</li> <li>• The Commission is the central part of the Joint FAO/WHO Food Standards Programme and was established by FAO and WHO to protect consumer health and promote fair practices in food trade.</li> </ul>
9.	b	
10.	b	<ul style="list-style-type: none"> <li>• Co-operative banks are financial entities which belong to its members, who are at the same time the owners and the customers of their bank. They are established by State laws.</li> <li>• Co-operative banks in India are registered under the Cooperative Societies Act. They are also regulated by the RBI and governed by Banking Regulations Act, 1949 and Banking</li> </ul>

		<p>Laws (Co-operative Societies) Act, 1955.</p> <ul style="list-style-type: none"> <li>• Cooperative banks lend as well as accept deposits. They are established with the aim of funding agriculture and allied activities and financing village and cottage industries. National Bank for Agriculture and Rural Development (NABARD) is the apex body of cooperative banks in India.</li> <li>• Urban Co-operative Banks (UCB) are regulated and supervised by State Registrars of Co-operative Societies (RCS) in case of single-state co-operative banks and Central Registrar of Co-operative Societies (CRCS) in case of multi-state co-operative banks and by the RBI. ****</li> <li>• The banking related functions such as issue of license to start new banks/branches, matters relating to interest rates, loan policies, investments and prudential exposure norms are regulated and supervised by the Reserve Bank under the provisions of the Banking Regulation Act, 1949 after an amendment in 1966.</li> <li>• The Reserve Bank of India came out with draft guidelines allowing primary UCBs to augment capital through issuance of equity shares, preference shares and debt instruments. <ul style="list-style-type: none"> <li>◦ The UCBs could raise share capital by issue of equity to persons within their area of operation enrolled as members and also through additional equity shares to the existing members.</li> </ul> </li> </ul>
11.	b	
12.	b	<ul style="list-style-type: none"> <li>• Mitakshara and Dayabhaga terms were used to denote regions. It is not related to the caste system. The Mitakshara Law applies to the whole of India except Bengal and Assam. The Dayabhaga Law applies to the communities living in the states of Bengal and Assam and other parts of the world.</li> <li>• The difference between Dayabhaga and Mitakshara is in the basic idea of them. Dayabhaga does not give anyone the right to property before the death of their forefathers whereas Mitakshara gives anyone the right to property just after their birth. ****</li> <li>• Dayabhaga system prevails in West Bengal and allows both the male and female members of the family to be coparceners. Mitakshara system, on the other hand, prevails all over India except West Bengal and allows only the male members to be coparceners.</li> </ul>
13.	c	
14.	b	

15.	c	
16.	c	
17.	d	
18.	a	
19.	c	
20.	b	
21.	a	The term <b>Mitakshara</b> is derived from the name of a commentary written by Vijnaneswara, on the Yajnavalkya Smriti. <b>It is observed in all parts of India</b> and subdivided into the Benares, the Mithila, the Maharashtra, and the Dravida schools.
22.	c	
23.	b	<ul style="list-style-type: none"> <li>Established in 1957 as <b>**Asia's highest honour and premier prize.**</b>It celebrates <b>**individuals who demonstrate exceptional spirit in serving the people of Asia, regardless of their background.**</b>The award is presented annually on <b>August 31st</b>, which coincides with the birthday of <b>Ramon Magsaysay, the third president of the Republic of the Philippines</b>, who inspired its creation. Awardees are presented with a certificate, a medallion with an embossed image of Ramon Magsaysay and a cash prize. The award is internationally recognised as the <b>Nobel Prize</b> counterpart of Asia.</li> <li><b>Categories of Recognition:</b> <ul style="list-style-type: none"> <li>The award initially featured six categories, including "Government Service", "Public Service", "Community Leadership", "Journalism, Literature, and Creative Communication Arts", "Peace and International Understanding", and "Emergent Leadership".</li> <li>However, post-2009, the <b>Ramon Magsaysay Award is no longer being given in fixed Award categories, except for Emergent Leadership.</b></li> </ul> </li> </ul>
24.	c	<ul style="list-style-type: none"> <li>Apes (Hominoidea) are a branch of Old World tailless simians native to Africa and Southeast Asia. They are divided into Greater Apes and Lesser Apes. The Greater Apes family is Hominidae, with subfamily comprising of gorillas, hominoids and chimps, whereas Lesser Apes belong to family of Hylobatidae. <ul style="list-style-type: none"> <li>For example, Bonobos, Pygmy Chimpanzee, Gibbon,</li> </ul> </li> </ul>

		<p>Orangutan etc.</p> <ul style="list-style-type: none"> <li>• Monkeys and apes are both primates, which means they both are parts of the human family tree. The quickest way to tell the difference between a monkey and an ape is by the presence or absence of a tail. Almost all monkeys have tails, but apes do not.</li> <li>• Their bodies are different in other ways too – monkeys are generally smaller and narrow-chested, while apes are larger and have broad chests and shoulder joints that allow them to swing through trees.</li> <li>• Gray langurs or Indian langurs are a group of Old World monkeys native to the Indian subcontinent constituting the entirety of the genus <i>Semnopithecus</i>. Gray langurs are fairly terrestrial, inhabiting forests, open light wooded habitats, and urban areas of the Indian subcontinent.</li> <li>• Most species are found at low to moderate altitudes, but the Nepal gray langur and Kashmir gray langur are found up to 4,000 m in the Himalayas.</li> </ul>
25.	d	
26.	c	
27.	b	
28.	b	
29.	c	
30.	b	<p><b>Magellanic Cloud?</b></p> <ul style="list-style-type: none"> <li>• The Magellanic Clouds are <b>irregular galaxies</b> that share a gaseous envelope and lie about 22° apart in the sky near the south celestial pole.</li> <li>• They are comprised of two irregular galaxies, <b>the Large Magellanic Cloud (LMC)</b> and the <b>Small Magellanic Cloud (SMC)</b>, which orbit the Milky Way once every 1,500 million years and each other once every 900 million years.</li> <li>• These companion galaxies were named for the Portuguese navigator Ferdinand Magellan, whose crew discovered them during the first voyage around the world (1519–22).</li> <li>• Magellanic Clouds were formed at about the same time as the Milky Way Galaxy, approximately 13 billion years ago.</li> <li>• They are presently captured in orbits around the Milky Way Galaxy and have experienced several tidal encounters with each other and with the Galaxy.</li> </ul>

		<ul style="list-style-type: none"> <li>• They contain numerous <b>young stars and star clusters</b>, as well as some much older stars.</li> <li>• The Magellanic Clouds are visible to the unaided eye in the Southern Hemisphere.</li> </ul>
31.	c	
32.	c	
33.	c	
34.	c	
35.	b	
36.	b	
37.	b	<ul style="list-style-type: none"> <li>• The Global Ocean Commission was an international initiative between 2013 and 2016 to raise awareness, promote action to address the degradation of the ocean and help restore it to full health and productivity.</li> <li>• International Seabed Authority (ISA) is a UN body set up to regulate the exploration and exploitation of marine non-living resources of oceans in international waters. It considers applications for exploration and exploitation of deep-sea resources from contractors, assesses environmental impact assessments and supervises mining activities.</li> <li>• India was the first country to receive the status of a 'Pioneer Investor' in 1987 and was given an area of about 1.5 lakh sq. km in the Central Indian Ocean Basin (CIOB) for nodule exploration. India's exclusive rights to explore polymetallic nodules from seabed in the Central Indian Ocean Basin was extended in 2017 for five years. ****</li> <li>• Rare earth minerals have unique magnetic, luminescent, and electrochemical properties and thus are used in many modern technologies, including consumer electronics, computers and networks, communications, health care, national defense, etc. They are called 'rare earth' because earlier it was difficult to extract them from their oxides forms technologically.</li> <li>• Rare earth minerals are present on the seafloor in international waters. The sea floor of various oceans boasts one of the world's largest untapped collections of rare-earth minerals.</li> </ul>
38.	b	<p><b>Climatic and Clean Air Coalition (CCAC)</b></p> <ul style="list-style-type: none"> <li>• The governments of <b>Bangladesh</b>, Mexico, Sweden, Ghana,</li> </ul>

		<p>Canada and the <b>United States</b>, along with the United Nations Environment Programme (<b>UNEP</b>), in 2012, came together to initiate efforts to <b>treat short-lived climate pollutants</b> as a collective and urgent <b>challenge</b>.</p> <ul style="list-style-type: none"> <li>• Together, they formed the <b>Climate &amp; Clean Air Coalition</b> to support fast action on climate, food security, public health, and energy efficiency. <b>Hence, statement 1 is not correct.</b></li> <li>• After carbon dioxide, the short-lived climate pollutants like <b>methane</b>, tropospheric ozone, <b>black carbon</b>, and <b>hydrofluorocarbons</b> are the most important contributors to the <b>man-made global greenhouse effect</b>. <b>Hence, statement 2 is correct.</b></li> <li>• They are responsible for up to 45% of current global warming.</li> <li>• If no action is taken to <b>reduce emissions</b> of these pollutants, they are <b>expected to cause half of the warming</b> by human activity.</li> </ul>
39.	c	
40.	c	<p><b>BRIGHT STAR-23</b></p> <ul style="list-style-type: none"> <li>• <b>INS Sumedha, a Saryu class Naval Offshore Patrol Vessel (NOPV)</b>, arrived in Port Alexandria, Egypt for '<b>Exercise BRIGHT STAR-23.</b>'</li> <li>• It is a <b>multinational Tri-Services military exercise taking place in Port Alexandria, Egypt.</b> <ul style="list-style-type: none"> <li>◦ 34 countries are participating, making it the <b>largest joint military exercise ever conducted in the Middle East &amp; North Africa region.</b></li> </ul> </li> <li>• The exercise is divided into two phases: the <b>Harbour Phase and the Sea Phase.</b> <ul style="list-style-type: none"> <li>◦ The Harbour Phase includes cross-deck visits, professional exchanges, sports fixtures, and planning interactions.</li> <li>◦ The Sea Phase includes complex and high-intensity exercises such as cross-deck flying, anti-surface and anti-air exercises, and live weapon firing drills.</li> </ul> </li> <li>• The <b>Indian Navy is participating for the first time in Exercise BRIGHT STAR.</b></li> </ul>
41.	c	<ul style="list-style-type: none"> <li>• Also called <b>Wheat Allergy</b>, celiac disease is a chronic inflammation of the small intestine caused by an intolerance to gluten and usually present in genetically predisposed individuals.             <ul style="list-style-type: none"> <li>◦ <b>Gluten</b> is a general name for the <b>proteins</b> found in <b>wheat, rye, barley and triticale</b> – a cross between wheat and rye.</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>○ Gluten helps food maintain its shape, acting as the glue that holds food together.</li> <li>● <b>Effect of the disease on the body:</b> When people with celiac disease eat gluten, their body mounts an immune response that attacks the small intestine, indicating the disease being an <b>autoimmune disease</b>.             <ul style="list-style-type: none"> <li>○ These attacks lead to <b>damage on the villi</b>, small fingerlike projections that line the small intestine, that promote nutrient absorption.</li> <li>○ When the villi get damaged, <b>nutrients cannot be absorbed properly into the body</b>.</li> <li>○ Also, the <b>modern wheat</b> which is hexaploid rather than diploid, is <b>more antigenic</b>, meaning it <b>stimulates the production of antibodies when introduced into the body</b>.</li> </ul> </li> <li>● People with celiac disease have a two times greater risk of developing <b>coronary artery disease</b>, and a four times greater risk of developing <b>small bowel cancers</b>.</li> <li>● Currently, <b>the only treatment</b> for celiac disease is <b>lifelong adherence to a strict gluten-free diet</b>. People living gluten-free must avoid foods with wheat, rye and barley, such as bread and beer.</li> <li>● Many people <b>who do not have celiac disease can also be sensitive to gluten</b>, known as <b>non celiac gluten sensitivity</b>.</li> </ul>
42.	b	
43.	c	<a href="https://www.downtoearth.org.in/blog/natural-disasters/marrakech-artisans-who-have-helped-rebuild-moroccan-city-before-are-among-those-hit-hard-by-earthquake-91665">https://www.downtoearth.org.in/blog/natural-disasters/marrakech-artisans-who-have-helped-rebuild-moroccan-city-before-are-among-those-hit-hard-by-earthquake-91665</a>
44.	a	<p><i>Phanigiri artefacts</i></p> <ul style="list-style-type: none"> <li>● The <b>Phanigiri Buddhist site</b> is considered one of the most important finds in Buddhist iconography in this millennium.</li> <li>● Phanigiri (meaning hillock of snake hood) is a small village <b>in the state of Telangana</b>.</li> <li>● <b>Key findings</b> <ul style="list-style-type: none"> <li>○ The <b>thoranas</b> discovered at Phanigiri are very important as they are among the first found south of Sanchi.</li> <li>○ The same thorana has a panel that <b>shows both Mahayana and Hinayana</b> schools of thought.</li> <li>○ There is evidence from Phanigiri that <b>shows the deification of Buddha</b>, and we can date this change. From a historical and spiritual identity, there is a <b>transition to canonisation and ritual</b>.</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>○ The <b>monograph</b> of the event has the <b>image of the Buddha</b> wearing what looks <b>like a Roman toga with folds</b> carved in limestone.</li> </ul>
45.	c	<p><b>Salem Sago gets GI tag</b></p> <p><i>Salem Sago</i></p> <ul style="list-style-type: none"> <li>● Sago is derived from <b>raw tapioca</b>.</li> <li>● It is in the form of <b>small hard globules</b>, or pearls, and is pearl white in colour.</li> <li>● It is manufactured from the wet starch powder crushed from tapioca roots.</li> <li>● The wet starch powder is used for producing sago, and the dry powder has been used as a raw material for industrial purposes.</li> </ul> <p><i>Tapioca</i></p> <ul style="list-style-type: none"> <li>● It is a major <b>horticulture crop</b> cultivated on nearly 3 lakh hectares in Tamil Nadu, producing 60 lakh tonnes of the crop.</li> <li>● <b>Climate and Soil</b> <ul style="list-style-type: none"> <li>○ Any well-drained soil, preferably <b>red lateritic loamy soil</b>.</li> <li>○ It thrives best in a tropical, warm, humid climate</li> <li>○ <b>Rainfall:</b> Well-distributed rainfall <b>of over 100 cm per annum</b>.</li> <li>○ This crop can be cultivated upto an elevation of 1000 m.</li> </ul> </li> </ul> <p><i>GI tag</i></p> <ul style="list-style-type: none"> <li>● It is a sign used on products that have a <b>specific geographical origin and possess qualities</b> or a reputation that are due to that origin.</li> <li>● This is typically used for <b>agricultural products, foodstuffs, wine and spirit drinks, handicrafts, and industrial products</b>.</li> <li>● The <b>**Geographical Indications of Goods (Registration and Protection) Act, 1999,**</b> seeks to provide for the registration and better protection of geographical indications relating to goods in India.</li> <li>● This GI tag is valid <b>for 10 years</b>, following which it can be renewed.</li> </ul>
46.	d	
47.	d	<p><b>Two rescued wild animals Fishing Cat and a Python released in D. Ering Wildlife Sanctuary</b></p> <p><i>D. Ering Wildlife Sanctuary</i></p> <ul style="list-style-type: none"> <li>● <b>Location:</b> It is a protected area located in the <b>East Siang</b></li> </ul>



		<p><b>district of Arunachal Pradesh.</b></p> <ul style="list-style-type: none"> <li>• This sanctuary was <b>established in 1977</b> and covers an area of around <b>190 square kilometres.</b></li> <li>• It is <b>named after the pioneer of modern Arunachal, the late Daying Ering</b>, who was a famed Indian politician.</li> <li>• <b>Vegetation:</b> It is located in a unique ecosystem that comprises <b>tropical evergreen, semi-evergreen, and deciduous forests.</b></li> <li>• It is also <b>home to the Siang River</b>, which is one of the major rivers in Arunachal Pradesh.</li> <li>• <b>Streams and channels intersect the whole Sanctuary.</b> There are small to <b>medium waterbodies in the Sanctuary</b> that provide <b>good nesting sites for birds.</b></li> <li>• <b>Flora:</b> <ul style="list-style-type: none"> <li>○ <b>About 80% of the Sanctuary is covered with grassland</b>, and the <b>rest is riverine forest patches</b> with mixed bamboo and secondary forests.</li> <li>○ The main grass species are <i>Saccharum spontaneum</i>, <i>S. arundinaceum</i>, and <i>Neyraudia rennaudiana</i>.</li> </ul> </li> <li>• <b>Fauna:</b> <ul style="list-style-type: none"> <li>○ It is home to <b>buffalo, elephant, tiger, leopard cat, barking deer</b>, civet cat, sambar, jackal,</li> <li>○ Migratory <b>birds like cranes, wild ducks, storks, and waterfowl</b> from Siberia and Mongolia can be spotted every year.</li> </ul> </li> </ul>
48.	b	
49.	a	
50.	c	<p>The <b>Phase II of Varuna-23</b>, the bilateral naval exercise between the <b>Indian and French Navies</b>, took place in the <b>Arabian Sea.</b></p> <ul style="list-style-type: none"> <li>• This exercise involved <b>guided missile frigates, tankers, Maritime Patrol Aircraft</b>, and integral helicopters from both sides.</li> <li>• Varuna, which began in <b>1993 and was officially named in 2001</b>, has evolved over the years into a symbol of the strong strategic relationship between <b>India and France.</b></li> </ul>
51.	a	<p><b>Mudu Konaje site</b></p> <ul style="list-style-type: none"> <li>• The figurines were datable to 800-700 BC.</li> <li>• It was <b>the biggest megalithic dolmen</b> site, which consisted of nine dolmens on the slope of a stone hill.</li> <li>• Of the <b>eight figurines</b> found, <b>there are two cow bovines, one mother goddess, two peacocks, a horse, the hand of a mother goddess</b>, and an unknown object.</li> </ul>

		<ul style="list-style-type: none"> <li>○ One of the two <b>cow bovines</b> is a <b>solid handmade human body</b> with a bull's head and is about 9 cm in height and 5 cm in width.</li> <li>○ It has the clear <b>snout of a bull, and its femininity</b> is well attested by two breasts attached by the applique method.</li> <li>○ A thin line of groove is created from below the right arm to the left side of the neck.</li> <li>○ It has two arms, but the hands are broken. The left arm is turned towards the front. A flattened, wide belly and a round section below the belly are seen. Indication of two legs is clearly found. An elongated round bun at the back of the head as headgear is seen.</li> <li>○ The <b>second cow bovine</b> is another <b>solid handmade figurine</b>, which is about 7.5 cm in height and 4 cm in width.</li> <li>○ It has a bovine snout and <b>an archetype headgear</b>. It has applique <b>ornamentation around the neck</b> and below the belly. At the bottom, there are no legs but a prop to stand the image.</li> <li>○ One of the <b>two peacocks</b> is a solid peacock, which is about 11 cm in height and 7 cm in width. It <b>is dipped into red ochre</b>, and its feathers are down towards the earth.</li> <li>○ Another peacock has an elongated head created separately, which can be inserted into a shallow body. The body is missing, and the feathers are designed upwards.</li> <li>○ The <b>torso of a mother goddess has no head</b>, hands and legs</li> <li>● <b>Significance</b> <ul style="list-style-type: none"> <li>○ The <b>cow bovines</b> found in the dolmens help to <b>determine the chronology of the dolmens</b>.</li> <li>○ <b>Terracottas</b> found in the megalithic burial provide a solid ground for the <b>study of the Bhoota cult</b> or Daiva Aradhane of coastal Karnataka.</li> <li>○ <b>Cow bovine</b> or Cow goddess had its parallels in Malampuzha megalithic terracotta figurines of Kerala and Egypt.</li> </ul> </li> </ul>
52.	d	
53.	c	<ul style="list-style-type: none"> <li>● Zika virus is a flavivirus which was first discovered in 1947 in monkeys and then in humans in Uganda in 1952.</li> <li>● Both Zika and Dengue have similarities in terms of symptoms of fever, skin rashes, conjunctivitis, muscle and joint pain,</li> </ul>

		<p>malaise, and headache. In addition to this, the mode of transmission is also same for both the diseases, i.e., both are spread by <i>Aedes aegypti</i> and <i>Aedes albopictus</i> species of mosquitoes.</p> <ul style="list-style-type: none"> <li>● Modes of Zika Transmission:             <ul style="list-style-type: none"> <li>○ Mosquito bites</li> <li>○ From mother to child during pregnancy, which can cause microcephaly and other severe fetal brain defects. Zika virus has also been found in breast milk.</li> <li>○ Sexual transmission from infected partner.</li> </ul> </li> </ul>
54.	a	<p><b>Antibody</b></p> <ul style="list-style-type: none"> <li>● Antibody, also called immunoglobulin, is a <b>protective protein produced by the immune system</b> in response to the presence of a foreign substance, called an antigen.</li> <li>● A wide range of substances are <b>regarded by the body as antigens</b>, including disease-causing organisms and toxic materials.</li> <li>● Antibodies recognize and attack onto antigens in order to remove them from the body.</li> </ul> <p><b>What are the Different Types of Antibodies?</b></p> <ul style="list-style-type: none"> <li>● <b>IgG:</b> <ul style="list-style-type: none"> <li>○ It is the <b>main antibody in blood and it has a powerful ability to bind to bacteria</b> and toxins, and thus it takes on an important role in the biological defense system.</li> <li>○ It is the <b>only isotype that can pass through the placenta</b>, and IgG transferred from the mother's body protects a newborn.</li> </ul> </li> <li>● <b>IgM:</b> <ul style="list-style-type: none"> <li>○ It is <b>constructed of five units of basic Y-shaped structures</b> and is mainly distributed to the blood. Produced first upon pathogen invasion by B cells, IgM has a key role in the initial immune system defense for protecting the body.                     <ul style="list-style-type: none"> <li>■ The B-cell, also called B-lymphocyte, is a type of white blood cell that plays a significant role in protecting your body from infection.</li> </ul> </li> </ul> </li> <li>● <b>IgA:</b> <ul style="list-style-type: none"> <li>○ While in blood, <b>IgA is mainly present as monomers</b> (the shape of a single Y), but it forms dimers (a combination of 2 Ys) in secretions such as bowel fluid, nasal discharge, and saliva, to prevent bacterial invasion from a mucous membrane. It is also present in breast milk and protects the gastrointestinal tract of newborns from bacterial and viral infection.</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>● <b>IgD:</b> <ul style="list-style-type: none"> <li>○ It is <b>present on the surface of B cells</b> and it is reported to play a role in the induction of antibody production and the prevention of respiratory tract infections.</li> </ul> </li> <li>● <b>IgE:</b> <ul style="list-style-type: none"> <li>○ It is believed that <b>IgE was originally related to immunity reactions to parasites</b>. By binding to mast cells, <b>IgE is believed to be involved in allergies such as pollinosis</b>.</li> </ul> </li> </ul>
55.	a	
56.	c	<ul style="list-style-type: none"> <li>● <b>Longpi Pottery:</b> <ul style="list-style-type: none"> <li>○ Named after the village of <b>Longpi in Manipur</b>, the <b>Tangkhul Naga tribes practice</b> this exceptional pottery style.</li> <li>○ Unlike most pottery, Longpi <b>does not resort to the potter's wheel</b>.</li> <li>○ All shaping is done with the hand and with the help of moulds.</li> <li>○ The characteristic grey-black cooking pots, the stout kettles, quaint bowls, mugs, and nut trays, at times with a handle of fine cane, are trademarks of Longpi.</li> </ul> </li> </ul>
57.	c	<p><i>Dinkinesh asteroid</i></p> <ul style="list-style-type: none"> <li>● It was discovered in <b>1999 by the LINEAR survey</b>.</li> <li>● Dinkinesh is a slow rotator with a moderately large light-curve amplitude.</li> <li>● It is an <b>S-type asteroid, which</b> means it is composed <b>mainly of silicates and some metal</b>.</li> <li>● It will be the first fly-by target of the Lucy mission on November 1, 2023, during its cruise to the Trojan Clouds.</li> <li>● The observations were made by Lucy's high-resolution camera, the Lucy <b>Long Range Reconnaissance Imager</b> ( L'LORRI instrument ).</li> </ul>
58.	b	<ul style="list-style-type: none"> <li>● Stem cells are undifferentiated or "blank," cells capable of developing into cells that serve numerous functions in different parts of the body. Most cells in the body are differentiated cells. These cells can only serve a specific purpose in a particular organ. For example, red blood cells are specifically designed to carry oxygen through the blood.</li> <li>● Stem cells are not only found in mammals, but also found in plants and other organisms.</li> </ul>

		<ul style="list-style-type: none"> <li>• Since stem cells have the ability to turn into various other types of cells, scientists believe that they can be useful for treating and understanding diseases. According to the scientists, stem cells can be used to:                     <ul style="list-style-type: none"> <li>○ Grow new cells in a laboratory to replace damaged organs or tissues.</li> <li>○ Correct parts of organs that do not work properly</li> <li>○ Research causes of genetic defects in cells.</li> <li>○ Research how diseases occur or why certain cells develop into cancer cells.</li> <li>○ Test new drugs for safety and effectiveness.</li> <li>○ To carry out medical therapies.</li> </ul> </li> </ul>
59.	c	
60.	c	
61.	b	<p><i>Lucy Mission</i></p> <ul style="list-style-type: none"> <li>• It was launched <b>by NASA from</b> the Cape Canaveral Space Force Station in Florida in 2021.</li> <li>• It is a <b>12-year mission</b> which will take close observations of <b>nine of Jupiter's Trojans</b> and two main belt asteroids along with that.</li> <li>• It is the first spacecraft sent to study the <b>Trojan asteroids</b>, which orbit the Sun in the same path that the planet Jupiter takes.</li> <li>• It has recently captured images of <b>Eurybates, Polymele, Leucus and Leucus asteroids.</b></li> </ul>
62.	a	<p>Metal Ambabari Craft: It is curated by the Meena Tribe and also embraces enamelling, a meticulous process that elevates metal decoration. Today, it extends beyond gold to metals like silver and copper.</p>
63.	c	
64.	b	
65.	c	<p><i>Bandipur Tiger Reserve (BTR)</i></p> <ul style="list-style-type: none"> <li>• <b>Location:</b> <ul style="list-style-type: none"> <li>○ It is situated in two contiguous <b>districts (Mysore and Chamarajanagar) of Karnataka</b> and located at the <b>tri-junction area of the States of Karnataka, Tamil Nadu and Kerala.</b></li> <li>○ Geographically, it is an <b>“ecological confluence” of the</b></li> </ul> </li> </ul>

		<p style="text-align: center;"><b>Western and Eastern Ghats.</b></p> <ul style="list-style-type: none"> <li>● <b>History:</b> <ul style="list-style-type: none"> <li>○ It was <b>once a hunting ground for the rulers of the neighbouring kingdom of Mysore.</b></li> <li>○ It was <b>established in 1931 as Venugopala Wildlife Park by the Maharaja of Mysore.</b></li> <li>○ It was <b>then expanded with the name Bandipur Tiger Reserve</b> under Project Tiger <b>in 1973.</b></li> </ul> </li> <li>● It is <b>part of the larger Nilgiri Biosphere Reserve</b>, which is recognised as a UNESCO World Heritage Site.</li> <li>● BTR is <b>surrounded by:</b> <ul style="list-style-type: none"> <li>○ <b>Nagarahole Tiger Reserve</b>(Tamil Nadu) in the North West (Kabini Reservoir separates the two).</li> <li>○ <b>Mudumalai Tiger Reserve</b>(Tamil Nadu) in the South.</li> <li>○ <b>Wayanad Wildlife Sanctuary</b>(Kerala) in the South West.</li> </ul> </li> <li>● Rivers: It is <b>surrounded by River Kabini in its north and River Moyar in its south.</b></li> <li>● <b>Climate:</b> Bandipur has a <b>typical tropical climate</b> with distinct wet and dry seasons.</li> <li>● <b>Flora:</b> <ul style="list-style-type: none"> <li>○ It comprises diverse <b>vegetation ranging from dry deciduous to tropical mixed deciduous.</b></li> <li>○ It includes <b>rosewood, Indian kino tree, sandalwood, Indian laurel, clumping bamboo, giant clumping bamboo</b> etc.</li> </ul> </li> <li>● <b>Fauna:</b> <ul style="list-style-type: none"> <li>○ It is a shelter for the <b>largest population of wild Asian elephants in South Asia.</b></li> <li>○ It comprises <b>other mammals such as Bengal tiger, gaur, sloth bear, golden jackal, dhole, four-horned antelope, etc.</b></li> </ul> </li> </ul>
66.	c	<p><i>MotoGP</i></p> <ul style="list-style-type: none"> <li>● The MotoGP, or <b>Grand Prix Motorcycle Racing</b>, is the <b>premier motorcycle championship in the world.</b></li> <li>● It is the <b>oldest motorsport championship</b> in the world, with the <b>first-ever annual competition being held in 1949.</b></li> <li>● <b>The governing body for MotoGP is the Fédération Internationale de Motocyclisme (FIM).</b></li> <li>● <b>Races:</b> <ul style="list-style-type: none"> <li>○ It is a <b>non-stop race</b> from start to finish, <b>without any pit stops.</b></li> <li>○ <b>Each race lasts between 40 and 45 minutes over a distance of between 100 and 130 km</b>, depending on</li> </ul> </li> </ul>

		<p>the circuit.</p> <ul style="list-style-type: none"> <li>● <b>Engine Capacity:</b> <ul style="list-style-type: none"> <li>○ <b>Earlier labelled to the “500 cc” category only, in 2002</b>, this oldest motorcycle championship underwent a <b>change and increased the engine capacity to 990cc.</b></li> <li>○ Again in 2007, the rules were altered, limiting the engine capacity to 800 cc, <b>which was again changed to 1000 cc in 2012.</b></li> </ul> </li> <li>● The <b>championship sees multiple races</b> around the world in a <b>season that goes from March until November.</b></li> <li>● The championship is <b>run on Points basis. Points are won by each Rider</b> (finishing 1st, 2nd, 3rd till the 15th position) <b>and each Team (Team Championship) and Constructor (Constructors’ Championship).</b></li> </ul> <p><i>MotoGP 2023:</i></p> <ul style="list-style-type: none"> <li>● The <b>2023 season has 11 teams and 22 riders</b> - two riders from each team.</li> <li>● This season <b>has 21 Grand Prix races in 2023</b> around the world. <b>One of these locations this season is India.</b></li> <li>● <b>Where is the Moto GP race in India?</b> <ul style="list-style-type: none"> <li>○ Moto GP Bharat this year <b>will be hosted at the Buddh International Circuit in Noida, Uttar Pradesh.</b></li> <li>○ It is a <b>five-kilometre-long track with a width of 12 metres.</b></li> <li>○ This <b>track has 16 corners</b>, 8 being left-hand corners and 8 being right-hand corners.</li> <li>○ <b>The longest straight on this track is 1006 metres.</b></li> </ul> </li> </ul>
67.	a	
68.	b	
69.	a	<p><i>Bhoj wetland</i></p> <ul style="list-style-type: none"> <li>● It consists of two contiguous <b>human-made reservoirs</b>, the upper and lower lakes, located in the city of Bhopal, <b>Madhya Pradesh.</b></li> <li>● The Upper lake is called <b>Bhojtal (Bada Talaab)</b> and the Lower Lake is known as <b>Chhota Talaab.</b></li> <li>● The lakes are very rich in biodiversity, particularly <b>for macrophytes, phytoplankton and zooplankton.</b></li> <li>● It has more than 15 kinds of fish and several vulnerable species, including turtles, amphibians and aquatic invertebrates.</li> <li>● It was designated <b>as the Ramsar</b> site in 2002.</li> </ul>

70.

a

*Cirrus Clouds*

- They are **delicate, feathery clouds** that are **made mostly of ice crystals**.
- They are **thin and wispy in appearance**, often appearing as **delicate, high-altitude filaments or strands**.
- Their **wispy shape comes from wind currents, which twist and spread the ice crystals into strands**.
- They are **usually white or have a light grey colour**. In the **daytime, they are whiter than any other cloud** in the sky.
- They are **commonly known as "mare's tails"** because they are **shaped like the tail of a horse**.
- Typically **found at heights greater than 20,000 feet (6,000 metres)**, cirrus clouds are **composed of ice crystals that originate from the freezing of supercooled water droplets**.
- They **generally occur in fair weather and point in the direction of air movement** at their elevation.

*Other Main Cloud Types:*

- **Cumulus clouds:**
  - They are **puffy clouds** that **look like puffs of cotton with a distinct white or light grey appearance**.
  - They have a **relatively short life cycle**. They form, grow, and dissipate relatively quickly under stable atmospheric conditions.
  - **Cumulus clouds that do not get very tall are indicators of fair weather**. If they **do grow tall, they can turn into thunderstorms**.
  - The **bottom of cumulus clouds are fairly close to the ground**.
- **Stratus clouds:**
  - They are **low-level cloud formations** that are characterised by their **uniform and featureless appearance**.
  - They look like **flat sheets of clouds**.
  - They typically **cover the sky like a continuous, greyish or whitish blanket** and are **often associated with overcast or cloudy weather conditions**.
  - They **may stay in one place for several days**.
  - They **form at altitudes below 6,500 feet (2,000 metres) above sea level**.

*Thunderstorm*

- A thunderstorm is a weather phenomenon characterised by the **occurrence of lightning, thunder, heavy rain, and sometimes strong winds or hail**.
- It is a **type of storm that develops when warm, moist air**



		<p><b>rises rapidly in an unstable atmosphere.</b> It is the <b>result of convection.</b></p> <ul style="list-style-type: none"> <li>• <b>Thunderstorms can vary in intensity, size, and duration,</b> ranging from isolated, short-lived events to long-lasting, widespread systems.</li> </ul>
71.	d	
72.	d	<p><b>List of Critical Minerals</b> The list of critical minerals is as follows: Antimony, Beryllium, Bismuth, Cobalt, Copper, Gallium, Germanium, Graphite, Hafnium, Indium, Lithium, Molybdenum, Niobium, Nickel, PGE, Phosphorous, Potash, REE, Rhenium, Silicon, Strontium, Tantalum, Tellurium, Tin, Titanium, Tungsten, Vanadium, Zirconium, Selenium and Cadmium.</p>
73.	d	<ul style="list-style-type: none"> <li>• The world has breached six of the nine planetary boundaries necessary to maintain Earth's stability and resilience- a study published in Science Advances warned.</li> </ul> <p><b>Details</b></p> <ul style="list-style-type: none"> <li>• The six boundaries include climate change, biosphere integrity (genetic diversity and energy available to ecosystems), land system change, freshwater change (changes across the entire water cycle over land), biogeochemical flows (nutrient cycles), and novel entities (microplastics, endocrine disruptors, and organic pollutants).</li> </ul> <p><b>Planetary Boundaries</b></p> <ul style="list-style-type: none"> <li>• These are the thresholds or limits beyond which significant, potentially irreversible changes to Earth's ecosystems and the global environment could occur, endangering the planet's habitability.</li> </ul> <p><b>Earth System Processes</b></p> <ul style="list-style-type: none"> <li>• The planetary boundaries are associated with nine essential Earth system processes that help maintain the stability and resilience of the Earth system. They are:             <ol style="list-style-type: none"> <li>1. <b>Climate Change</b> Climate change refers to the long-term alterations in Earth's temperature, precipitation patterns, and other meteorological phenomena, primarily driven by anthropogenic greenhouse gas emissions. The concentration of atmospheric carbon dioxide has surpassed 410 ppm, the highest level in the past 800,000 years at least. This boundary is of planetary and societal significance because it directly affects global ecosystems, weather patterns, and the frequency of extreme events, posing risks to agriculture, infrastructure, human health, and the stability of ecological systems.</li> <li>1. <b>Biosphere Integrity</b></li> </ol> </li> </ul>

The rapid decline in global biodiversity, driven by habitat destruction, overexploitation, pollution, and climate change, has led to what is now recognized as the Earth's sixth mass extinction. Species are currently going extinct at a rate 1,000 times higher than the background rate. Biodiversity loss is of planetary and societal significance because it weakens the resilience of ecosystems, reduces the availability of natural resources, and compromises the essential services

#### 1. **Biogeochemical Flows**

The biogeochemical flows of nitrogen and phosphorus have been dramatically altered by human activities, such as fertilizer application and fossil fuel combustion. Approximately 80% of nitrogen and 75% of phosphorus applied to croplands end up in the environment. Disruptions to these elemental cycles are of planetary and societal significance because they can lead to eutrophication, biodiversity loss, and the creation of oxygen-depleted "dead zones" in aquatic ecosystems, undermining water quality and fisheries.

#### 1. **Introduction of Novel Entities**

Novel entities encompass new substances, organisms, and technologies introduced into the environment by human activities, such as synthetic chemicals, genetically modified organisms, and nanomaterials. Over 350,000 different chemicals and mixtures are commercially available, with many having unknown long-term impacts. This boundary is of planetary and societal significance because novel entities can disrupt ecosystems, bioaccumulate in food chains, and pose risks to human health and the environment, often with unpredictable and far-reaching consequences. Addressing this boundary is essential for preserving the integrity of Earth's systems and safeguarding the well-being of present and future generations.

#### 1. **Land-System Change**

Land-system change encompasses the conversion of natural landscapes, such as forests and wetlands, into agricultural and urban areas. Since the 1960s, the world has lost approximately 20% of its forest cover. This boundary is crucial because land-system change can result in habitat loss, biodiversity decline, soil degradation, and disruptions to the global carbon cycle, undermining ecosystem services and exacerbating climate change.

#### 1. **Freshwater Use**

The unsustainable extraction and consumption of freshwater resources have led to the depletion of rivers, lakes, and aquifers. Agriculture accounts for about 70% of global freshwater withdrawals. This boundary is critical because water scarcity threatens food security, human health, and economic development, exacerbating social tensions and heightening the risk of geopolitical conflicts over access to water resources.

#### 1. **Stratospheric Ozone Depletion**

The depletion of stratospheric ozone, primarily caused by the release

		<p>of chlorofluorocarbons (CFCs) and other ozone-depleting substances, reduces the protective barrier against harmful ultraviolet (UV) radiation. The 1987 Montreal Protocol led to a nearly 99% reduction in controlled ozone-depleting substances. This boundary is of planetary and societal importance because increased UV radiation can cause skin cancer, cataracts, and immune system suppression in humans, as well as damage to ecosystems and agricultural productivity.</p> <p>1. <b>Ocean Acidification</b></p> <p>As oceans absorb anthropogenic carbon dioxide emissions, their pH levels decrease, resulting in a more acidic environment. Since the beginning of the Industrial Revolution, the global oceanic pH has dropped by 0.1 units. This planetary boundary is crucial because ocean acidification negatively impacts marine life, particularly calcifying organisms such as coral reefs and shellfish, threatening biodiversity, food security, and the livelihoods of millions of people dependent on ocean resources.</p> <p>1. <b>Atmospheric Aerosol Loading</b></p> <p>Aerosols, tiny solid or liquid particles suspended in the atmosphere, influence air quality, human health, and climate. Fine particulate matter (PM2.5) is responsible for an estimated 4.2 million premature deaths globally each year. Addressing this boundary is vital because aerosols can cause respiratory and cardiovascular diseases, disrupt regional weather patterns, and impact global climate through their interaction with sunlight and cloud formation.</p>
74.	c	<ul style="list-style-type: none"> <li>● <b>Picoflare jets</b> are <b>small-scale phenomena on the sun</b> that release a significant amount of energy in a short period, typically lasting only a few dozen seconds.             <ul style="list-style-type: none"> <li>○ These jets, named as pico, as they carried <b>approximately one-trillionth as much energy as the largest flares that the sun is believed to be able to produce.</b> <ul style="list-style-type: none"> <li>■ <b>'Pico'</b> is an order of magnitude that <b>denotes 10<sup>12</sup>, or one trillionth of a unit.</b></li> </ul> </li> </ul> </li> <li>● The phenomenon responsible for creating these jets in the sun's coronal holes is <b>likely magnetic reconnection.</b> <ul style="list-style-type: none"> <li>○ Magnetic reconnection involves the <b>breaking and reconnecting of magnetic field lines</b>, which releases a substantial amount of stored energy.</li> </ul> </li> </ul> <p><i>Solar Winds</i></p> <ul style="list-style-type: none"> <li>● The solar wind is created by the <b>outward expansion of plasma</b> (a collection of charged particles) from the <b>Sun's corona</b> (outermost atmosphere).             <ul style="list-style-type: none"> <li>○ This plasma is continually heated to the point that the <b>Sun's gravity cannot hold it</b> down. It then travels</li> </ul> </li> </ul>

		<p>along the Sun's magnetic field lines that extend radially outward.</p> <ul style="list-style-type: none"> <li>As the <b>Sun rotates (once every 27 days)</b>, it winds up its magnetic field lines above its polar regions into a large <b>rotating spiral</b>, creating a <b>constant stream of "wind."</b> <ul style="list-style-type: none"> <li>These winds, known as "<b>streamers</b>," originate from areas on the Sun's surface called "<b>coronal holes</b>," which are <b>bright patches in the corona</b>.</li> </ul> </li> <li>As the solar wind moves away from the Sun, it <b>forms a vast region around it called the "heliosphere."</b> This bubble extends well beyond the orbits of most planets in our solar system.</li> </ul>
75.	b	
76.	d	
77.	b	
78.	d	
79.	c	<p><b>Gresham's Law</b></p> <ul style="list-style-type: none"> <li><b>Gresham's law</b> is a monetary principle that states that "<b>bad money drives out good</b>". <b>Bad money</b> is a currency with equal or less value than its face value. <b>Good money</b> has the potential for a greater value than its face value. <ul style="list-style-type: none"> <li>This means that if there are two types of <b>money in circulation</b>, one with a <b>higher intrinsic value and one with a lower intrinsic value</b>, people will tend to hoard the more valuable money and spend the less valuable money. <ul style="list-style-type: none"> <li>As a result, the <b>less valuable money will dominate the market</b>, while the more valuable money will disappear from circulation.</li> </ul> </li> <li>This law comes into play when the <b>government fixes the exchange rate between two currencies</b>, creating a disparity between the official rate and the market rate. <ul style="list-style-type: none"> <li>It applies not just to <b>paper currencies but also to commodity currencies</b> and other goods.</li> </ul> </li> </ul> </li> <li><b>Instances of Gresham's Law in Action:</b> <ul style="list-style-type: none"> <li>Gresham's Law became noticeable during <b>Sri Lanka's economic crisis</b> when the country's Central Bank set a <b>fixed exchange rate between the Sri Lankan rupee and the U.S. dollar</b>. <ul style="list-style-type: none"> <li>Despite unofficial market rates suggesting that</li> </ul> </li> </ul> </li> </ul>

		<p>the U.S. dollar was worth much more, the <b>government insisted on a fixed rate of 200 Sri Lankan rupees for one U.S. dollar.</b></p> <ul style="list-style-type: none"> <li>■ This led to the <b>Sri Lankan rupee being considered more valuable than it actually was</b> and the U.S. dollar being undervalued according to market rates. <ul style="list-style-type: none"> <li>○ As a result, <b>fewer U.S. dollars were available in the official foreign exchange market</b>, and people started to avoid using them in official transactions.</li> </ul> </li> <li>● <b>Contrast to Gresham's Law:</b> <ul style="list-style-type: none"> <li>○ In contrast to <b>Gresham's Law, Thiers' Law</b> highlights a phenomenon where "<b>good money drives out bad.</b>" In a free exchange rate environment, <b>people tend to favor higher-quality currencies and gradually discard those they perceive as inferior.</b> <ul style="list-style-type: none"> <li>■ The <b>rise of private cryptocurrencies (Good Money)</b> in recent years is often cited as an example of <b>how well-regarded, private money producers can displace government-issued currencies (Bad Money).</b></li> </ul> </li> </ul> </li> </ul>
80.	c	<p><b>Western Disturbance:</b> The Western Disturbance traditionally brings vital moisture from European seas to the western Himalayas and parts of northern India in the winter and spring. In 2023, the Western disturbance persisted late into the summer, complicating the transition to the Southwest Monsoon season. This unusual behavior raised concerns about its effects on precipitation patterns. Climate-linked warming is likely to weaken winter precipitation from the Western disturbance and shift it to more intense rain events.</p>
81.	d	
82.	c	<p>Devastating floods in Derna, eastern Libya, have resulted in over 5,000 feared dead and thousands missing due to breached dams and flash floods caused by the Mediterranean storm named Daniel.</p>
83.	b	
84.	c	<p><b>Gulabi meenakari handicraft:</b></p> <ul style="list-style-type: none"> <li>● It is one of the rarest crafts in India that is practised in the by lanes of Varanasi, near Gai Ghat.</li> <li>● It is <b>an art form from Persia</b> and involves <b>colouring the surface of metals</b> by fusing different colours.</li> <li>● This art <b>was brought to the city of Varanasi</b> by Persian</li> </ul>

		<p>enamellists <b>during the Mughal</b> era around the early 17th century.</p> <ul style="list-style-type: none"> <li>• The word 'mina' is the feminine form of the Persian word 'Minoo' and means 'heaven'.</li> <li>• It refers to the azure colour of heaven.</li> <li>• In Varanasi, it is practised <b>on jewellery and home decor items</b>.</li> <li>• Minakari work uses very <b>simple tools like salai</b> (an etching tool), kiln, metal palette, mortar and pestle, <b>kalam</b> (a tool used to apply enamel), brass dye, small scrubbing brush, forceps and <b>takala</b> (a needle-like tool to apply colours).</li> <li>• <b>This craft can be found popularly in three forms</b> <ul style="list-style-type: none"> <li>○ <b>Ek Rang Khula Meena</b> in which only gold outlines are exposed and a single transparent colour is used.</li> <li>○ <b>Panch Rangi Meena</b> in which the five colours of red, white, green, light blue and dark blue are used</li> <li>○ <b>Gulabi Meena</b> in which pink is the dominant colour.</li> </ul> </li> <li>• <b>Varanasi</b> is highly popular for Gulabi Minakari.</li> </ul>
85.	b	
86.	c	<p>Researchers at <b>Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR)</b>, an autonomous institute of the <b>Department of Science and Technology (DST)</b> have discovered that naturally occurring plant-based <b>polyphenols (beneficial plant compounds with antioxidant properties)</b>, like <b>tannic acid found in Chestnut and Oak twigs</b>, can modulate the <b>ferroptosis-AD axis</b> to yield a safe, cost-effective strategy for combating <b>Alzheimer's disease (AD)</b>.</p> <ul style="list-style-type: none"> <li>• AD is a progressive neurodegenerative disorder characterized by <b>memory and cognitive decline</b>. <ul style="list-style-type: none"> <li>○ Ferroptosis is a type of <b>programmed cell death</b> that is <b>dependent on iron and is linked to the development of AD</b>.</li> </ul> </li> <li>• AD aligns with characteristics of ferroptosis, including <b>abnormal iron build-up</b>, and reduced activity of the antioxidant enzyme <b>glutathione peroxidase 4 (GPX4)</b>.</li> <li>• <b>Tannic acid activates and enhances GPX4</b>, offering a comprehensive approach to combat AD.</li> </ul>
87.	c	<p><b>Cash Reserve Ratio (CRR)</b></p> <ul style="list-style-type: none"> <li>• The percentage of cash required to be kept in reserves as against the bank's total deposits, is called CRR.</li> <li>• All banks in India, except Regional Rural Banks (RRBs) and Local Area Banks (LABs), have to deposit the CRR money to RBI.</li> </ul>

		<ul style="list-style-type: none"> <li>○ RRBs and LABs are exempted from maintaining CRR with RBI, <b>as per the RBI Act, 1934</b>. However, they have to maintain CRR with themselves in the form of <b>cash or gold or unencumbered approved securities</b>.</li> <li>● Banks can't lend the CRR money to <b>corporates or individual borrowers</b>, banks can't use that money for investment purposes, and <b>Banks don't earn any interest on that money</b>.</li> <li>● <b>Need to Have Reserve cash with the RBI:</b> <ul style="list-style-type: none"> <li>○ Since a part of the bank's deposits is with the RBI, it ensures the <b>security of the amount in case of any emergencies</b>.</li> <li>○ The cash is <b>readily available when customers want</b> their deposits back.</li> <li>○ CRR helps in keeping <b>inflation under control</b>. If there is a threat of high inflation in the economy, RBI increases the CRR, so that banks need to keep more money in reserves, effectively reducing the amount of money that is available to the banks. <ul style="list-style-type: none"> <li>■ This curbs the <b>excess flow of money in the economy</b>.</li> </ul> </li> <li>○ When there is a need to pump funds into the market, the RBI lowers the CRR rate, which in turn, helps the banks provide loans to a large number of businesses and industries for investment purposes. <b>Lower CRR also boosts the growth rate of the economy</b>.</li> <li>○ The CRR and other monetary tools require every commercial bank to maintain but not the NBFC.</li> </ul> </li> </ul>
88.	a	<ul style="list-style-type: none"> <li>● Rosh Hashanah is observed on the first and second days of the Jewish month of Tishrei, which usually falls in September or October of the Gregorian calendar.</li> <li>● It is considered the Jewish New Year and a time of judgment when God reviews the deeds of each individual in the past year and determines their fate for the upcoming year.</li> <li>● It is a time for self-examination, repentance (teshuvah), and setting intentions for personal and spiritual growth in the coming year.</li> </ul>
89.	b	<p>Union Minister Sarbananda Sonowal has extended an invitation for an Indo-Russian Workshop on the <b>Eastern Maritime Corridor (EMC) in Vladivostok</b>, Russia.</p> <p><b>What is the Eastern Maritime Corridor (EMC)?</b></p> <p><b>The Eastern Maritime Corridor is a proposed sea route between Chennai, India, and Vladivostok, Russia, passing through the Sea of Japan, the South China Sea, and the Malacca Strait.</b></p>

		<p><b>Benefits for India include:</b></p> <ul style="list-style-type: none"> <li>● <b>Significant time reduction:</b> It shortens the <b>transportation time by up to 16 days</b>, making it more efficient.</li> <li>● <b>Presence in Southeast Asia:</b> Chennai Port's strategic location opens trade opportunities with Southeast Asian nations like Thailand, Vietnam, and Indonesia.</li> <li>● <b>Access to Russia's Far East:</b> Vladivostok Port provides access to resource-rich regions, offering opportunities in sectors like energy, mining, and technology for Indian businesses.</li> </ul>
90.	b	<p><b>In San Francisco Bay, ecologists work to protect sevengill sharks</b> <i>Broadnose Sevengill Shark</i></p> <ul style="list-style-type: none"> <li>● It is a <b>large seven-gilled</b> with a wide head and short, blunt snout shark.</li> <li>● It is related to sharks that lived in the <b>Jurassic Period about 300 million years ago</b>.</li> <li>● They prefer <b>tropical, temperate, shallow waters</b></li> <li>● <b>Distribution:</b> <ul style="list-style-type: none"> <li>○ It is found in all oceans except the North Atlantic and the Mediterranean Sea.</li> <li>○ In the eastern Pacific Ocean, they are found from southeastern Alaska to southern Baja California, Mexico and from Colombia to Chile.</li> </ul> </li> <li>● <b>Biology and Behaviour</b> <ul style="list-style-type: none"> <li>○ They can grow to a <b>maximum length of 2.9 m</b>. Females grow longer than their male counterparts.</li> <li>○ They feed on anything, such as other sharks, rays, chimaeras, bony fish, hagfish, dolphins and porpoise meat, seals, shark egg cases and sea snails.</li> </ul> </li> <li>● <b>Conservation status</b></li> <li>● <b>IUCN:</b> Vulnerable</li> </ul>
91.	c	<p><i>Pralay ballistic missiles</i></p> <ul style="list-style-type: none"> <li>● It is a quasi-ballistic surface-to-surface missile.</li> <li>● <b>Range:</b> It can hit targets 150-500 km away.</li> <li>● <b>Capacity:</b> The missile can carry 350-700 kg of high-grade explosives.</li> <li>● It is developed by the <b>Defence Research Development Organisation (DRDO)</b></li> <li>● It is powered by a <b>solid propellant rocket motor</b> and other new technologies.</li> <li>● The missile guidance system includes state-of-the-art navigation and integrated avionics.</li> <li>● It can change its path after covering a certain range in mid-air.</li> </ul>



		<p><i>Ballistic Missiles</i></p> <ul style="list-style-type: none"> <li>• These are launched <b>directly into the upper layers of the earth's atmosphere.</b></li> <li>• They travel outside the atmosphere, where the warhead detaches from the missile and falls towards a predetermined target.</li> <li>• They are <b>rocket-propelled, self-guided weapons systems</b> which can carry conventional or nuclear munitions. They can be launched from aircraft, ships, submarines, and land.</li> </ul>
92.	c	<p><b>Tagore's home Santiniketan added to UNESCO World Heritage List</b></p> <p>Santiniketan</p> <ul style="list-style-type: none"> <li>• It is located in the <b>state of West Bengal.</b></li> <li>• It was established in 1901 by <b>Rabindranath Tagore.</b></li> <li>• It was a residential <b>school and centre for art based on ancient Indian traditions.</b></li> <li>• In 1921, a 'world university' was established at Santiniketan, later recognised as '<b>Visva Bharati</b>'.</li> <li>• Visva-Bharati in Santiniketan is Bengal's only central university whose chancellor is the Prime Minister.</li> <li>• It is distinct from the prevailing British colonial architectural orientations of the early 20th century and of European modernism.</li> <li>• It <b>represents approaches toward pan-Asian modernity, drawing on ancient, medieval and folk</b> traditions from across the region.</li> </ul> <p><i>UNESCO World Heritage</i></p> <ul style="list-style-type: none"> <li>• A World Heritage Site (WHS) is a <b>landmark or area with legal protection</b> by an international convention administered by UNESCO under <b>the UNESCO World Heritage Convention, established in 1972.</b></li> <li>• These sites are designated by UNESCO for having cultural, historical, scientific or other forms of significance.</li> <li>• <b>Categorisation of Sites – The sites are categorised in three types:</b> <ul style="list-style-type: none"> <li>○ <b>Cultural heritage sites</b>– It includes historic buildings and town sites, important archaeological sites, and works of monumental sculpture or painting</li> <li>○ <b>Natural heritage sites</b>– It includes those natural areas that have excellent ecological and evolutionary processes, endangered species etc.</li> <li>○ <b>Mixed heritage sites</b>– It contain elements of both natural and cultural significance.</li> </ul> </li> <li>• India has <b>41 world heritage sites</b>, including 33 cultural</li> </ul>

		properties, 7 natural properties and 1 mixed site.
93.	c	<p><i>String Technology</i></p> <ul style="list-style-type: none"> <li>• A set of <b>porous fibres twisted into strings</b> and engineered to have a water-loving (hydrophilic) core and water-repelling surface.</li> <li>• When one end is dipped in a salt-water solution, the water travels up the string because of capillary action.</li> <li>• Then, the water evaporates quickly from the string's surface. This leaves behind <b>salt ions such as sodium and lithium</b>.</li> <li>• The <b>water will continue to evaporate</b> like this as the salts become increasingly concentrated, eventually forming sodium chloride and lithium chloride crystals.</li> <li>• The strings don't just concentrate on the salts. Since lithium and sodium have different physical properties, they crystallise at different locations on the strings.</li> <li>• Sodium, with its low solubility, crystallises on the lower part, while the highly soluble lithium salts crystallise near the top.</li> </ul> <p><i>The current method of production</i></p> <ul style="list-style-type: none"> <li>• A large majority of the lithium produced in the world is extracted from "<b>brine reservoirs</b>" located in salt flats.</li> <li>• Conventional methods of extraction rely on a <b>series of massive evaporation ponds</b> that concentrate lithium from saltwater reservoirs and salt flats of underground aquifers.</li> <li>• This method of production can <b>require hundreds of square kilometres</b>, and it often takes months or even years to produce lithium that can be used in batteries.</li> <li>• It is commercially viable in a few locations around the world.</li> </ul> <p><i>Lithium</i></p> <ul style="list-style-type: none"> <li>• It is a <b>soft, silvery-white metal</b> that belongs to the <b>alkali metals group</b> of the periodic table of the elements.</li> <li>• <b>Features</b> <ul style="list-style-type: none"> <li>○ It has the <b>lowest density</b> of all metals.</li> <li>○ It is the lightest of the solid elements.</li> <li>○ It <b>reacts vigorously</b> with</li> </ul> </li> <li>• <b>Occurrence:</b> <ul style="list-style-type: none"> <li>○ It does not occur as a metal in nature but is found combined in small amounts in igneous rocks.</li> </ul> </li> <li>• <b>Major Reserves:</b> Its reserves are majorly concentrated in the <b>lithium triangle in South America</b> – Argentina, Bolivia &amp; Chile, with 50% of the deposits concentrated in these regions.</li> </ul>
94.	c	<p><i>Tungareashwar Wildlife Sanctuary</i></p> <ul style="list-style-type: none"> <li>• <b>Location:</b> It is located in the <b>Palghar district of Maharashtra</b>,</li> </ul>

		<p><b>75 km away from Mumbai.</b></p> <ul style="list-style-type: none"> <li>• It forms a <b>corridor between Sanjay Gandhi National Park and Tansa Wildlife Sanctuary.</b></li> <li>• <b>Landscape:</b> It is characterised by <b>hilly terrain, dense forests, and small rivers or streams.</b></li> <li>• <b>Vegetation:</b> There are three different types of forests – <b>Dry Deciduous, Moist Deciduous and Semi Evergreen.</b></li> <li>• <b>Flora:</b> It is home to several species of trees, including <b>teak, bamboo, and mango.</b></li> <li>• <b>Fauna:</b> <ul style="list-style-type: none"> <li>◦ Some commonly spotted animals in the sanctuary include <b>Leopard, Wild Boar, Barking Deer, Langur, Bonnet and Rhesus Macaque,</b> and Black-naped Hare.</li> <li>◦ A multitude of birds, including the <b>Crested Serpent-eagle, Jungle Owlet, White-eyed Buzzard, Oriental Honey-buzzard,</b> Emerald Dove and Heart-spotted Woodpecker, can be found here.</li> </ul> </li> <li>• <b>Several ancient temples</b> are within its boundaries. The most famous of these temples is the <b>Tungareshwar Temple, dedicated to Lord Shiva.</b></li> </ul>
95.	c	<p><i>Indian Coast Guard</i></p> <ul style="list-style-type: none"> <li>• It is an <b>armed force that protects India's maritime interests and enforces maritime law, with jurisdiction over the territorial waters of India, including its contiguous zone and exclusive economic zone.</b></li> <li>• <b>History:</b> it was formally <b>established in 1978 by the Coast Guard Act, 1978</b> as an independent armed force of India.</li> <li>• <b>Parent ministry:</b> It operates under the <b>Ministry of Defence.</b></li> <li>• <b>Administration:</b> The organisation is <b>headed by the Director General Indian Coast Guard (DGICG).</b></li> <li>• <b>HQ: New Delhi</b></li> </ul>
96.	d	<p><i>Anamudi Shola National Park</i></p> <ul style="list-style-type: none"> <li>• It is located in the <b>state of Kerala.</b></li> <li>• It is surrounded by <b>Eravikulam National Park, Pampadum Shola National Park, Chinnar Wildlife Sanctuary</b> and Mathikettan Shola Park.</li> <li>• <b>Vegetation:</b> <ul style="list-style-type: none"> <li>◦ It consists of <b>southern subtropical hill forests, southern montane wet temperate forests and moist deciduous forests.</b></li> <li>◦ The unique thing in the dense shola woods that houses a dense patch of stunted trees will be the <b>luxurious presence of lichen, mosses, and climbers.</b></li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>● <b>Flora:</b> The place is home to around 174 species of herbs and shrubs, 62 species of trees and around 40 species of climbers, of which quite a few of them are endemic.</li> <li>● <b>Fauna:</b> Leopards, civet cats, wolves, Indian bison, wild boars, elephants, tigers, panthers, sloth bears etc.</li> </ul>
97.	b	<ul style="list-style-type: none"> <li>● Preamble to the Constitution of India WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a SOVEREIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC and to secure to all its citizens:             <ul style="list-style-type: none"> <li>● JUSTICE, social, economic and political;</li> <li>● LIBERTY of thought, expression, belief, faith and worship;</li> <li>● EQUALITY of status and of opportunity; and to promote among them all</li> <li>● FRATERNITY assuring the dignity of the individual and the unity and integrity of the Nation;</li> <li>● IN OUR CONSTITUENT ASSEMBLY this twentysixth day of November, 1949, do HEREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION.</li> <li>● The Preamble does not embody the economic liberty.</li> </ul> </li> </ul>
98.	b	
99.	a	
100.	c	
101.	a	<p><i>Vanadium</i></p> <ul style="list-style-type: none"> <li>● It is a <b>chemical element</b> with the <b>symbol "V" and atomic number 23.</b></li> <li>● It is a <b>silver-gray, ductile, and malleable metallic element.</b></li> <li>● It is <b>harder than most metals</b> and exhibits <b>good corrosion resistance against alkalis and acids.</b></li> <li>● <b>History:</b> <ul style="list-style-type: none"> <li>○ It was <b>discovered (1801) by</b> the Spanish mineralogist <b>Andrés Manuel del Río, who named it erythronium</b> but eventually came to believe it was merely impure chromium.</li> <li>○ The <b>element was rediscovered (1830) by</b> the Swedish chemist <b>Nils Gabriel Sefström, who named it after Vanadis, the Scandinavian goddess</b> of beauty and youth.</li> <li>○ The <b>English chemist Henry Enfield Roscoe first isolated the metal in 1867</b> by hydrogen reduction of vanadium dichloride.</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>● <b>Occurrence:</b> <ul style="list-style-type: none"> <li>○ Found <b>combined in various minerals, coal, and petroleum</b>, vanadium is the <b>22nd most abundant element in Earth's crust</b>.</li> <li>○ It is <b>found in over 60 different minerals, including vanadinite, carnotite, roscoelite, and patronite</b>.</li> <li>○ The <b>largest resources</b> of vanadium minerals <b>are found in South Africa and Russia</b>.</li> </ul> </li> <li>● <b>Leading Producers: China, South Africa, and Russia.</b></li> <li>● <b>Applications:</b> <ul style="list-style-type: none"> <li>○ <b>Alloys:</b> <ul style="list-style-type: none"> <li>■ One of the primary uses of vanadium is <b>as an alloying element in steel and other metals</b>.</li> <li>■ <b>Vanadium steel</b>, for example, is <b>known for its strength, toughness, and ability to maintain hardness at high temperatures</b>. It is commonly used in <b>tools, cutlery, and structural materials</b>.</li> </ul> </li> <li>○ In <b>Vanadium Flow Batteries (VFBs)</b>, vanadium is used <b>to create a reliable, safe and stable solution for the storage of renewable energy</b>.</li> <li>○ <b>Chemical Catalysts:</b> Vanadium compounds are <b>used as catalysts in various chemical reactions, such as the production of sulfuric acid</b>.</li> <li>○ <b>Nuclear Applications:</b> Vanadium is used in some nuclear reactors <b>as a structural material and neutron moderator</b>.</li> <li>○ In the <b>medical sphere</b>, vanadium is used to <b>treat a number of ailments, including diabetes, heart disease and high cholesterol</b>.</li> </ul> </li> </ul>
102.	c	<p><i>Gulf of Khambhat</i></p> <ul style="list-style-type: none"> <li>● It is an <b>inlet of the Arabian Sea</b> along the west coast of India, <b>in the state of Gujarat</b>.</li> <li>● <b>Earlier, it was known as the Gulf of Cambay</b>.</li> <li>● Stretching for <b>about 80 miles</b>, it <b>divides the Kathiawar Peninsula from the south-eastern part of Gujarat</b>.</li> <li>● <b>Rivers:</b> The <b>Narmada, Tapti, Mahi, and Sabarmati</b> rivers drain into it.</li> <li>● <b>Geography:</b> <ul style="list-style-type: none"> <li>○ It is a <b>relatively shallow and enclosed body of water, characterized by its tidal movements and extensive mudflats</b>.</li> <li>○ It is <b>known for having one of the highest tidal ranges in the world</b>, with tides that can rise and fall</li> </ul> </li> </ul>

		<p>dramatically.</p> <ul style="list-style-type: none"> <li>○ There are <b>some coral reefs around small inlets in the western part</b> of the Gulf.</li> </ul>
103.	c	<p>Hoysala Architecture</p> <ul style="list-style-type: none"> <li>● <b>About:</b> <ul style="list-style-type: none"> <li>○ The Hoysala Temples were built during the 12th and 13th centuries CE, showcasing the unique architectural and artistic brilliance of the Hoysala dynasty.                             <ul style="list-style-type: none"> <li>■ All these three Hoysala temples are protected monuments of the <b>Archaeological Survey of India (ASI)</b>.</li> </ul> </li> </ul> </li> <li>● <b>Key Elements:</b> <ul style="list-style-type: none"> <li>○ <b>Mantapa</b></li> <li>○ <b>Vimana</b></li> <li>○ <b>Sculpture</b></li> </ul> </li> <li>● <b>Characteristics:</b> <ul style="list-style-type: none"> <li>○ These temples are not just architectural wonders but also repositories of the <b>cultural and historical heritage of the Hoysala dynasty</b>.</li> <li>○ Hoysala temples are sometimes called hybrid or vesara as their unique style seems neither completely <b>dravida nor nagara</b>, but somewhere in between. They are easily distinguishable from other medieval temples.                             <ul style="list-style-type: none"> <li>■ <b>Hoysala architecture</b> is known for its distinctive blend of <b>Bhumija style prevalent in Central India</b>, the <b>Nagara traditions of northern and western India</b>, and the <b>Karnataka Dravida</b> modes favored by the <b>Kalyani Chalukyas</b>.</li> </ul> </li> <li>○ Contain <b>multiple shrines grouped around a central pillared hall</b> and laid out in the shape of an intricately-designed star.</li> <li>○ They are made out of soapstone which is a relatively soft stone, the artists were able to carve their sculptures intricately. This <b>can be seen particularly in the jewellery of the gods</b> that adorn their temple walls.</li> </ul> </li> </ul>
104.	c	
105.	c	<p>SHREYAS</p> <ul style="list-style-type: none"> <li>● <b>About:</b> <ul style="list-style-type: none"> <li>○ SHREYAS is an umbrella scheme, under the Ministry of Social Justice &amp; Empowerment.</li> <li>○ SHREYAS aims for the Educational Empowerment of OBC &amp; Economically Backward Class (EBC) students by</li> </ul> </li> </ul>

		<p>way of <b>awarding fellowships (financial assistance)</b> in obtaining <b>quality higher education and interest subsidy on educational loans for overseas studies.</b></p> <ul style="list-style-type: none"> <li>● <b>Sub-Schemes:</b> <ul style="list-style-type: none"> <li>○ The umbrella scheme of "SHREYAS" comprises <b>4 central sector sub-schemes.</b></li> </ul> </li> <li>● <b>Free Coaching Scheme for SCs and OBCs:</b> <ul style="list-style-type: none"> <li>○ <b>Objective:</b> <ul style="list-style-type: none"> <li>■ Provide <b>coaching of high quality to economically disadvantaged SCs and OBCs for competitive exams</b> and admission to technical and professional institutions.</li> </ul> </li> <li>○ <b>Income Ceiling:</b> Family income under the scheme is <b>capped at 8 lakhs per annum.</b></li> <li>○ <b>Slot Allocation:</b> 3500 slots are allotted annually.</li> <li>○ <b>Gender Inclusivity:</b> <b>30% of slots</b> are reserved for <b>females</b> in both categories.</li> <li>○ <b>Allocation Ratio:</b> The SC: OBC ratio is <b>70:30</b>, ensuring equitable access.</li> <li>○ <b>Outcomes:</b> From 2014-15 to 2022-23, 19,995 beneficiaries have benefited through this.</li> <li>○ <b>Top-Class Education for SCs:</b> <ul style="list-style-type: none"> <li>■ <b>Objective:</b> Recognize and promote <b>quality education among SC students, covering studies beyond the 12th class.</b></li> <li>■ <b>Income Ceiling:</b> The family income limit is set at <b>8 lakhs per annum.</b></li> <li>■ <b>Coverage:</b> 266 higher education institutes, including prestigious institutions like IIMs, IITs, and NITs.</li> <li>■ <b>Scholarship:</b> Under the scheme, tuition fee, non-refundable charges, academic allowance and other expenses are provided.</li> <li>■ <b>Outcomes:</b> From 2014-15 till 2022-23 21,988 beneficiaries have benefited through this.</li> </ul> </li> </ul> </li> </ul>
106.	c	
107.	d	
108.	b	
109.	d	
110.	a	<ul style="list-style-type: none"> <li>● The elephant herd is led by the oldest and largest female</li> </ul>

		<p>member (known as the matriarch). This herd includes the daughters of the matriarch and their offspring. <b>Hence, statement 1 is correct.</b></p> <ul style="list-style-type: none"> <li>• Elephants have the longest-known gestational (pregnancy) period of all mammals, lasting up to 680 days (22 months). <b>Hence, statement 2 is correct.</b> Females between 14 - 45 years may give birth to calves approximately every four years with the mean interbirth intervals increasing to five years by age 52 and six years by age 60. <b>Hence, statement 3 is not correct.</b></li> <li>• As per the Elephant Census (2017), Karnataka has the highest number of elephants (6,049), followed by Assam (5,719) and Kerala (3,054). <b>Hence, statement 4 is not correct.</b></li> <li>• <b>Therefore, option (a) is the correct answer.</b></li> </ul>
111.	c	<p><i>VB_HmeY_H4907</i></p> <ul style="list-style-type: none"> <li>• It is a new virus <b>discovered nearly 11,000 metres below the surface of the Pacific Ocean.</b></li> <li>• The virus has been <b>understood as a Bacteriophage, which means 'bacteria eater'.</b></li> <li>• It <b>infects halophilic bacteria</b> (bacteria that inhabit environments with high salt concentrations) <b>from the genus Halomonas.</b> Such bacteria are <b>generally found in deep-sea hydrothermal vents.</b></li> <li>• The virus is actually <b>very genetically similar to its host and is a lysogenic phage, meaning that it inserts its genetic material into the bacteria but usually doesn't kill it;</b> instead, <b>both virus and bacteria replicate at the same time.</b></li> </ul>
112.	c	<p><i>Foot and Mouth Disease (FMD)</i></p> <ul style="list-style-type: none"> <li>• It is a <b>highly contagious viral disease</b> that <b>affects cloven-hoofed animals</b>, including cattle, sheep, goats, and pigs.</li> <li>• It is a <b>transboundary animal disease (TAD)</b> that deeply affects the production of livestock and <b>disrupts regional and international trade in animals</b> and animal products.</li> <li>• It is a <b>disease of animals, not humans</b> and is a <b>different disease than hand, foot, and mouth disease</b>, which is common in young children.</li> <li>• <b>Causative agent:</b> It is caused by the <b>foot-and-mouth disease virus</b>, which is a member of the <b>Picornaviridae family.</b></li> <li>• <b>Transmission:</b> <ul style="list-style-type: none"> <li>○ It is primarily <b>spread through direct contact</b> between infected animals, <b>as well as through contaminated feed, equipment, vehicles</b>, clothing, and the movement of infected animals.</li> </ul> </li> </ul>



		<ul style="list-style-type: none"> <li>○ It can be <b>transmitted to humans in rare cases</b>. Human cases are typically mild and self-limiting, with symptoms similar to other viral illnesses.</li> <li>● <b>Symptoms:</b> Common symptoms in affected animals include <b>fever, blister-like sores on the tongue, lips</b>, and inside the mouth, <b>**as well as on the hooves (**hence the name "foot and mouth" disease), excessive salivation, lameness, and reduced milk</b> or meat production.</li> <li>● <b>Treatment:</b> <ul style="list-style-type: none"> <li>○ <b>Vaccination</b> is a common method of control for FMD in regions where the disease is endemic or where there is a high risk of outbreaks.</li> <li>○ <b>Vaccinated animals can still contract the virus</b>, but the disease's severity is reduced.</li> </ul> </li> </ul>
113.	c	<p><i>Shore Temple</i></p> <ul style="list-style-type: none"> <li>● It is a historic temple complex located <b>in Mamallapuram (Mahabalipuram), Tamil Nadu</b>.</li> <li>● It is dedicated to <b>Lord Shiva and Lord Vishnu</b>.</li> <li>● It was probably built during the reign of <b>Narasimhavarman II</b>, also known as Rajasimha (Pallava ruler), who reigned from 700 to 728 CE.</li> <li>● Shore Temple is one of a number of Hindu monuments at Mahabalipuram, on the <b>Coromandel Coast of Tamil Nadu</b>.</li> <li>● It is one of the <b>oldest structural excellence</b> (rock-cut) stone temples in South India.</li> <li>● The Mamallapuram monuments and temples, including the Shore Temple complex, were collectively designated a <b>UNESCO World Heritage site in 1984</b>.</li> </ul>
114.	d	<p><i>Veerangana Durgavati Tiger Reserve</i></p> <ul style="list-style-type: none"> <li>● <b>Location:</b> It is spread across Sagar, Damoh and Narsinghpur districts of <b>Madhya Pradesh</b>.</li> <li>● It is spread over an area of <b>2,339 square kilometres</b>.</li> <li>● It is the <b>seventh tiger reserve in Madhya Pradesh</b>.</li> <li>● It will <b>encompass areas within the Nauradehi Wildlife Sanctuary and Durgavati Wildlife Sanctuary</b>.</li> <li>● A <b>green corridor linking Panna Tiger Reserve (PTR) with Durgavati will be developed for the natural movement of the tiger</b> to the new reserve.</li> <li>● <b>Rivers:</b> Parts of the reserve fall <b>under the Narmada and Yamuna River basins</b>.</li> <li>● The <b>Singorgarh Fort is located within the reserve</b>.</li> <li>● <b>Vegetation: Dry deciduous type</b></li> <li>● <b>Flora:</b> The chief floral elements include <b>Teak, Saja, Dhaora</b>,</li> </ul>

		<p><b>Ber, Amla, etc.</b></p> <ul style="list-style-type: none"> <li>● <b>Fauna:</b> Tiger, leopard, wolf, jackal, Indian fox, striped hyena, Nilgai, Chinkara, Chital, Sambhar, Black Buck, Barking deer, Common Langur Rhesus Macaque etc.</li> </ul>
115.	c	<p><i>Fatehpur Sikri</i></p> <ul style="list-style-type: none"> <li>● It is a <b>city predominantly in red sandstone</b>, situated at a distance of <b>37 km from Agra, Uttar Pradesh</b>.</li> <li>● It was <b>founded in 1569 by the great Mughal emperor Akbar</b>, and <b>from 1571 to 1585, Fatehpur Sikri was the capital of the Mughal Empire</b>.</li> <li>● The <b>Mughal capital was moved to Delhi in 1586 because of Fatehpur Sikri's inadequate water supply</b>.</li> <li>● It was <b>designated a UNESCO World Heritage site in 1986</b>.</li> <li>● <b>Architecture:</b> <ul style="list-style-type: none"> <li>○ The structures in Fatehpur Sikri <b>combine elements of Persian, Indian, and Central Asian styles</b>.</li> <li>○ The structures are <b>made primarily of red sandstone</b>, which gives the city its distinctive appearance.</li> <li>○ It is <b>enclosed by an 11 km long fortification wall interspersed with numerous gateways</b>.</li> <li>○ <b>Notable buildings in the complex include:</b> <ul style="list-style-type: none"> <li>■ <b>**Jama Masjid:**</b>It is home to the Jama Masjid, <b>one of the largest mosques in India</b>. It is known for its <b>imposing structure, graceful arches, and intricately designed prayer hall</b>.</li> <li>■ <b>Buland Darwaza:</b> This colossal gateway, <b>also known as the "Gate of Magnificence,"</b> is an iconic monument of Fatehpur Sikri. It was <b>built to commemorate Akbar's victorious campaign in Gujarat</b> and is a grand example of Mughal architecture.</li> <li>■ <b>Diwan-i-Khas and Diwan-i-Aam:</b> These are two prominent buildings within the complex. <b>The Diwan-i-Khas (Hall of Private Audience)</b> was where Akbar held private meetings, while <b>the Diwan-i-Aam (Hall of Public Audience) was for conducting public affairs</b>.</li> <li>■ <b>Panch Mahal:</b> This <b>five-storied palace</b> is a unique structure <b>with open pavilions on each level</b>. It served as a <b>place for relaxation and entertainment</b>.</li> </ul> </li> </ul> </li> </ul>
116.	d	<p><i>Indo- European Languages</i></p> <ul style="list-style-type: none"> <li>● The Indo-European Languages are a <b>family of related</b></li> </ul>

		<p>languages that today are <b>widely spoken in the Americas, Europe, and also Western and Southern Asia.</b></p> <ul style="list-style-type: none"> <li>● <b>The hypothesis that this was so was first proposed by Sir William Jones, who noticed similarities between four of the oldest languages known in his time: Sanskrit, Latin, Greek, and Persian.</b></li> <li>● The <b>common ancestral (reconstructed) language is called Proto-Indo-European (PIE), which is no longer spoken.</b></li> <li>● There is <b>disagreement as to the geographic location where it originated from, with Armenia and the area to the north or west of the Black Sea being prime examples of proposed candidates.</b></li> <li>● The Indo-European family of languages is <b>the second-oldest in the world, only behind the Afroasiatic family</b> (which includes the languages of ancient Egypt and early Semitic languages).</li> <li>● It <b>has the largest number of speakers of all language families as well as the widest dispersion around the world.</b></li> <li>● <b>The various subgroups of the Indo-European family include:</b> <ul style="list-style-type: none"> <li>○ <b>Indo-Iranian languages (includes Sanskrit, Hindi, Bengali, Persian)</b></li> <li>○ <b>Italic languages</b> (including Latin and its descendants, the Romance languages)</li> <li>○ <b>Germanic languages</b></li> <li>○ Celtic languages</li> <li>○ Baltic languages</li> <li>○ Slavic languages</li> <li>○ Illyrian languages (extinct)</li> <li>○ Albanian language (and extinct cousins)</li> <li>○ <b>Anatolian languages</b> (extinct; most notable was the language of the Hittites)</li> <li>○ Tocharian languages (extinct tongues of Tocharians)</li> <li>○ Greek language</li> <li>○ Armenian language</li> </ul> </li> <li>● Some of the most commonly spoken Indo-European Languages in the modern world are <b>Spanish, English, Hindustani, Portuguese, Russian, Punjabi, and Bengali.</b></li> </ul>
117.	b	<p><i>Free Movement Regime</i></p> <ul style="list-style-type: none"> <li>● Under the FMR, <b>all the hill tribes, whether they are citizens of India or Myanmar, can travel within 16 km on either side of the Indo-Myanmar Border (IMB).</b></li> <li>● They <b>can cross the border by producing a border pass with a one-year validity</b> issued by the competent authority and</li> </ul>

		<p>can stay up to two weeks per visit.</p> <ul style="list-style-type: none"> <li>• The FMR was implemented in 2018 as part of the Central government's Act East policy.</li> <li>• FMR is implemented by both governments for the people living along the IMB.</li> <li>• This helps locals to get more culturally assimilated with trans-border villages through weddings, celebrating common festivals together and trans-border trade.</li> <li>• It is a reflection of the physical, ethnic, linguistic, cultural and fraternal linkages among the trans-border villagers.</li> <li>• <b>Indo-Myanmar Border (IMB):</b> <ul style="list-style-type: none"> <li>○ It runs for 1,643 km in the four states of Mizoram, Manipur, Nagaland, and Arunachal Pradesh.</li> <li>○ It runs from the tripoint with China in the north to the tripoint with Bangladesh in the south.</li> <li>○ Assam Rifles is tasked with guarding the IMB.</li> </ul> </li> </ul>
118.	b	<p><i>Bolson tortoises</i></p> <ul style="list-style-type: none"> <li>• It is the largest and rarest land reptile, as well as the rarest of the six Gopherus species native to the North American Continent.</li> <li>• Adult males are generally smaller than females in this species.</li> <li>• The tortoise is a land-dwelling reptile that spends more than 95% of its time in a burrow that it constructs with its shovel-like front feet.</li> <li>• All foraging, nesting and mating activities take place during the tortoise's active season from roughly April to October.</li> <li>• The average life span of a Bolson tortoise is not known but probably lies upward of a century.</li> <li>• <b>Distribution:</b> <ul style="list-style-type: none"> <li>○ This species at present, is restricted to a relatively small area of the grasslands of north-central Mexico in the states of Chihuahua, Coahuila and Durango, where it exists in disjunct sub-populations.</li> </ul> </li> <li>• <b>Conservation status</b> <ul style="list-style-type: none"> <li>○ <b>IUCN:</b> Critically Endangered</li> </ul> </li> </ul>
119.	a	<p><i>Mt. Semeru volcano</i></p> <ul style="list-style-type: none"> <li>• It is an active volcano in East Java, Indonesia.</li> <li>• It is located in a subduction zone, where the Indo-Australia plate subducts under the Eurasia plate.</li> <li>• It is the highest mountain on the island of Java.</li> <li>• The name "Semeru" is derived from Meru, the central world mountain in Hinduism, or Sumeru, the abode of gods.</li> </ul>

		<ul style="list-style-type: none"> <li>Indonesia sits on the <b>Pacific Ring of Fire</b>, where the meeting of continental plates causes high volcanic and seismic activity.</li> </ul> <p><i>Pacific Ring of Fire</i></p> <ul style="list-style-type: none"> <li>It, also known as the <b>Circum-Pacific Belt</b>, is a path along the <b>Pacific Ocean</b> characterised by active volcanoes and frequent earthquakes.</li> <li>Its length is approximately 40,000 kilometres.</li> <li>It traces boundaries between several tectonic plates—including <b>the Pacific, Juan de Fuca, Cocos, Indian-Australian, Nazca, North American, and Philippine Plates.</b></li> </ul>
120.	b	
121.	d	<p><i>Adi Shankaracharya</i></p> <ul style="list-style-type: none"> <li>Adi Shankaracharya, or <b>Shankara</b>, as he was known, was an <b>ancient Indian philosopher and theologian</b> who lived in the <b>early 8th century CE.</b></li> <li><b>Birth:</b> He was <b>born in Kalady</b>, a village in <b>present-day Kerala.</b></li> <li><b>Philosophical Contributions:</b> <ul style="list-style-type: none"> <li>He is best known for his role in the development and <b>propagation of Advaita Vedanta</b>, a non-dualistic school of Hindu philosophy.</li> <li>He <b>amalgamated the ideologies of 'Advaita Vedanta'</b> and also <b>explained the basic ideas of Upanishads.</b></li> <li><b>His most important work is his efforts to synthesize the six sub-sects, known as 'Shanmata.'</b> 'Shanmata', which literally translates to 'six religions,' is the <b>worship of six supreme deities.</b></li> <li>Shankaracharya <b>explained the existence of one Supreme Being (Brahman)</b> and that <b>the six supreme deities are part of one divine power.</b></li> <li>He also <b>founded 'Dashanami Sampradaya,'</b> which <b>talks about leading a monastic life.</b></li> <li>While Shankaracharya was a firm believer in ancient Hinduism, <b>he condemned the 'Mimamsa school of Hinduism',</b> which was purely based on <b>ritual practices.</b></li> <li><b>Four Mathas:</b> He <b>established four prominent monastic centers in India</b>, each associated with one of the cardinal directions: <b>Sringeri in the south, Dwarka in the west, Puri in the east, and Badrinath in the north.</b></li> </ul> </li> <li><b>Commentaries and Writings:</b> <ul style="list-style-type: none"> <li>He <b>wrote 18 commentaries on</b> major religious</li> </ul> </li> </ul>

		<p>scriptures like the <b>Bhagavad Gita, Brahmasutras, and 12 major Upanishads.</b></p> <ul style="list-style-type: none"> <li>○ His <b>review of 'Brahma Sutra' is known as 'Brahmasutrabhasya'</b>, and it is the oldest surviving commentary on 'Brahma Sutra'.</li> <li>○ He <b>wrote 23 books on the principles contained in the Advaita Vedanta philosophy, including Viveka Chudamani, AtmaBodha, Vakya Vritti, Upadesa Sahasri, etc.</b></li> <li>○ <b>72 devotional hymns and meditational hymns like Soundarya Lahari, Nirvana Shatakam, Maneesha Panchakam.</b></li> </ul> <ul style="list-style-type: none"> <li>● <b>Death:</b> Adi Shankaracharya is <b>believed to have attained Samadhi</b> (a state of deep meditation or realization) <b>at the young age of 32 in Kedarnath in the Himalayas.</b></li> </ul>
122.	a	<p><b>Juno is a solar-powered NASA spacecraft that makes long, looping orbits around giant planet Jupiter.</b></p> <ul style="list-style-type: none"> <li>● Juno was launched on <b>5th August, 2011.</b> The spacecraft traveled roughly 3 billion kilometers before <b>arriving at Jupiter in 2016.</b></li> <li>● Juno conducted its <b>53rd close flyby of Jupiter</b>, capturing a remarkable image of Jupiter and its <b>volcanic moon Io</b>, on 31st July 31, 2023. <ul style="list-style-type: none"> <li>○ <b>Io is known for its intense volcanic activity</b>, with hundreds of erupting volcanoes spewing molten lava and sulfurous gasses.</li> <li>○ <b>It is slightly larger than Earth's Moon</b>, and is tidally locked to Jupiter and completes both its rotation on its axis and orbit around Jupiter in <b>approximately 1.8 Earth days.</b></li> </ul> </li> </ul>
123.	c	<p><i>Advaita Vedanta</i></p> <ul style="list-style-type: none"> <li>● It refers to the <b>non-dualistic school of Hindu philosophy.</b> It is a <b>subschool of Vedanta</b>, which itself is one of six orthodox schools of Hindu philosophy.</li> <li>● It is <b>derived mostly from the Upanishads</b> and elaborated in detail by eminent scholars like <b>Sri Adi Shankaracharya and Gaudapada.</b></li> <li>● Dvaita means duality, and <b>Advaita means nonduality.</b> It <b>emphasizes the fundamental oneness or non-duality of all existence.</b></li> <li>● It <b>posits that the ultimate reality, known as Brahman, is the only true, unchanging, and absolute reality.</b></li> <li>● <b>Everything else, including the individual self (Atman), the material world (Prakriti), and the gods, is ultimately an</b></li> </ul>

		<p><b>illusion (maya) or a temporary manifestation of Brahman.</b></p> <ul style="list-style-type: none"> <li>● In other words, there is <b>no fundamental distinction</b> or separation <b>between the individual self and the ultimate reality.</b></li> <li>● <b>Jiva (Individual Soul):</b> In Advaita Vedanta, the individual soul or jiva is <b>seen as an expression of Brahman</b> temporarily bound by the limitations of the physical body and mind.</li> <li>● <b>Moksha (Liberation):</b> <ul style="list-style-type: none"> <li>○ Liberation (moksha) is achieved <b>when the jiva realizes its essential identity with Brahman.</b></li> <li>○ Moksha is the <b>ultimate goal of Advaita Vedanta.</b></li> <li>○ It is the <b>liberation from the cycle of birth and death</b> and the realization of one's true nature as Brahman.</li> <li>○ Moksha is <b>attained through self-realization (atma-jnana)</b> and the <b>removal of ignorance (avidya).</b></li> <li>○ Advaita Vedanta <b>offers various paths to realization, including Jnana Yoga</b> (the path of knowledge), <b>Bhakti Yoga</b> (the path of devotion), and <b>Karma Yoga</b> (the path of selfless action).</li> </ul> </li> <li>● While Advaita Vedanta teaches that the world is ultimately an illusion, <b>it acknowledges the relative reality of the empirical world and encourages individuals to fulfill their worldly duties (dharma)</b> while seeking spiritual realization.</li> </ul>
124.	b	<p><i>Dudhwa Tiger Reserve:</i></p> <ul style="list-style-type: none"> <li>● <b>Location:</b> It is located on the <b>Indo-Nepal border</b> in the district of <b>Lakhimpur-Kheri in Uttar Pradesh.</b></li> <li>● It <b>includes the Dudhwa National Park and two nearby Sanctuaries, viz. Kishanpur and Katarniaghat,</b> besides forest areas of North Kheri, South Kheri and Shahjahanpur forest divisions in its buffer.</li> <li>● <b>Rivers:</b> The <b>Sharda River</b> flows by the Kishanpur WL Sanctuary, <b>the Geruwa River</b> flows through the Katarniaghat WL Sanctuary, <b>and the Suheli and Mohana streams</b> flow in the Dudhwa National Park, <b>all of which are tributaries of the mighty Ghagra River.</b></li> <li>● <b>Vegetation:</b> The vegetation is of the <b>North Indian Moist Deciduous type</b>, containing some of the <b>finest examples of Sal forests</b> (<i>Shorea robusta</i>) in India.</li> <li>● <b>Flora:</b> The flora is <b>predominantly Sal forest along with its associate tree species like Terminalia alata (Asna), Lagerstroemia parviflora (Asidha), Adina cordifolia (Haldu), Mitragyna parviflora (Faldu), Gmelina arborea (Gahmhar), Holoptelea integrifolia (Kanju) etc.</b></li> <li>● <b>Fauna:</b></li> </ul>

		<ul style="list-style-type: none"> <li>○ The major mammals include <b>Tiger, Fishing cat, Monkey, Langur, Mongoose</b>, Small Indian Mongoose, small Indian civet, Jackal etc.</li> <li>○ <b>Birds include</b> a wide variety of species, which include migratory and resident ones like <b>Dabchick, spotbilled pelican, Large cormorant</b>, Little cormorant, Grey Heron, White stork, Black storck, White Ibis etc.</li> <li>○ <b>Reptiles include Mugger, Ghariyal, Python, Sandboa, Banded krait</b>, Russel's viper, Rat snake etc.</li> </ul>
125.	c	<p>L.69 grouping, in a meeting hosted by India, called for reform of UN Security Council (UNSC). L.69 is a pro-reform grouping that includes developing countries from Africa, Latin America and the Caribbean, Asia and the Pacific. The countries were united by a common desire to achieve comprehensive reform of UNSC and strengthen multilateralism. India is a leading country in L.69.</p>
126.	c	<p><b>Nasa to launch Psyche mission to metal-rich asteroid to find how Earth formed</b></p> <p><i>Psyche mission</i></p> <ul style="list-style-type: none"> <li>● The journey to <b>the asteroid, also named Psyche</b>, will span <b>nearly six years</b> and cover approximately 3.6 billion kilometers.</li> <li>● The asteroid orbits the <b>Sun between Mars and Jupiter</b>.</li> <li>● It is believed to be <b>a remnant core of a planetesimal</b>, composed primarily of iron-nickel metal.</li> <li>● Studying it from orbit could provide invaluable insights into the <b>composition of Earth's core</b>.</li> <li>● In addition to its primary mission, the Psyche spacecraft will also host a pioneering technology demonstration known as NASA's <b>Deep Space Optical Communications (DSOC) experiment</b>.</li> <li>● This laser communications system aims to <b>test high-bandwidth optical communications</b> back to Earth during the first two years of Psyche's journey.</li> <li>● This experiment could revolutionise how data is transmitted across vast distances in space, potentially enhancing our ability to explore the farthest reaches of the solar system.</li> <li>● NASA's Jet Propulsion Laboratory is responsible for mission management, operations and navigation.</li> </ul> <p><i>Deep Space Optical Communication (DSOC)</i></p> <ul style="list-style-type: none"> <li>● It is a <b>sophisticated new laser communication</b> technology that encodes data in photons at near-infrared wavelengths (rather than radio waves) to communicate between a probe in deep space and Earth.</li> <li>● Using light instead of radio allows the <b>spacecraft to</b></li> </ul>



		<p><b>communicate more data</b> in a given amount of time.</p> <ul style="list-style-type: none"> <li>The DSOC team is based at the Jet Propulsion Laboratory.</li> </ul>
127.	c	<p><b>IISER scientists identify a circular RNA that plays a crucial role in the replication of HIV-1 virus</b></p> <p><i>Circular RNA</i></p> <ul style="list-style-type: none"> <li>Ribonucleic acid is a molecule in living cells that carries genetic information and helps in the production of proteins.</li> <li>RNAs are in <b>general straight-chain</b>, free-end structures but these circular RNA (<b>'circRNA'</b>) <b>forms a closed-loop</b>.</li> <li>The circRNA plays a pivotal role in regulating <b>gene expression</b> and is essential for various biological processes.</li> <li>Its role in HIV-1 replication has remained unclear for a long time.</li> <li>Characterizing circular RNA can be tricky <b>because it usually is less abundant</b>, making it further challenging to detect in the native form.</li> <li>During viral infections, there's so much information from the virus that it can make it hard to find the less common ones like circular RNA.</li> </ul> <p><i>Recent findings</i></p> <ul style="list-style-type: none"> <li>The researchers developed a novel approach called <b>'circDR-Seq'</b>, to successfully capture circRNAs from <b>T-cells</b> (white blood cells) infected with the HIV-1 virus and identified a specific <b>circRNA named ciTRAN</b>, which plays an important role in the multiplication of the virus.</li> <li>HIV-1 <b>viral protein R (VpR)</b> is a multifunctional protein that plays specific roles at multiple stages of the HIV-1 viral life cycle and affects anti-HIV functions of the immune cells.</li> <li>Further found that HIV-1 infection induces ciTRAN expression in a Vpr-dependent manner and that ciTRAN interacts with serine/arginine-rich splicing factor 1 (SRSF1), a protein known to repress HIV-1 transcription,"</li> <li><b>How does this work?</b> <ul style="list-style-type: none"> <li>The results suggest that <b>HIV-1 hijacks ciTRAN</b> which is generally altered during immunological signaling, inflammation, and viral infection.</li> <li>It further prevents (SRSF1) from doing its job, thereby promoting efficient viral transcription.</li> <li>In addition, researchers demonstrated that an SRSF1-inspired mimic can inhibit viral transcription regardless of ciTRAN induction.</li> <li>The hijacking of a host circRNA thus represents a previously unknown facet of primate lentiviruses in overcoming transmission bottlenecks,</li> </ul> </li> </ul>

128.	a	<p><b>Combing operations conducted in areas surrounding Mukurthi National Park in the Nilgiris</b></p> <p><i>Mukurthi National Park</i></p> <ul style="list-style-type: none"> <li>● It is located in the <b>western corner of the Nilgiris Plateau</b> in the northwest corner of Tamil Nadu.</li> <li>● The park was created to protect its <b>keystone species, the Nilgiri tahr.</b></li> <li>● <b>Pykara and Kundah rivers</b> flow through the park along with several perennial streams that originate in the park and drain into the Bhavani Puzha.</li> <li>● It is designated as the UNESCO World Heritage Site</li> <li>● <b>Vegetation:</b> The Park is characterised by <b>montane grasslands</b> and shrublands interspersed with <b>sholas in a high altitude</b> area of high rainfall.</li> <li>● <b>Flora:</b> Here one can find shrubs like <b>Gaultheria fragrantissima, Helichrysum and Berberis</b> Other plants which can be seen here are Rhododendrons, Cinnamon, Mahonia, Satyrium, Raspberries etc.</li> <li>● <b>Fauna:</b> The park is home to some of the endangered wild species like Nilgiri tahr, Indian elephants, Nilgiri Langur, Bengal tiger and bonnet macaque etc.</li> </ul>
129.	d	<p><b>Galactic tides: Pushing and pulling the heavens</b></p> <p><i>Galactic tides</i></p> <ul style="list-style-type: none"> <li>● It is a tidal force experienced by <b>objects subject to the gravitational field of a galaxy</b> such as the Milky Way.</li> <li>● They are <b>caused by gravitational forces within a galaxy</b>, arising in the interactions between celestial objects like stars and gas clouds.</li> <li>● <b>Effects of Galactic tides</b> <ul style="list-style-type: none"> <li>○ These tidal forces influence various aspects of a galaxy's evolution.</li> <li>○ They can <b>reshape a galaxy structure</b> by creating tidal tails and bridges, promoting star formation, and disrupting smaller star systems.</li> <li>○ They also <b>disrupt the orbits of stars</b>, leading to long-term changes in galactic structure.</li> <li>○ Galactic tides also have a say in the ways in which proximate galaxies do and don't interact.</li> <li>○ Researchers have observed the closest galaxy to the Milky Way, the colossal Andromeda, and found that tidal streams near its edges could be signatures of dwarf galaxies that were later devoured.</li> <li>○ Galactic tides also <b>affect the supermassive black holes at galaxy centres</b>, leading to events that change</li> </ul> </li> </ul>

		the ways in which these cosmic beasts interact with nearby stars.
130.	d	<ul style="list-style-type: none"> <li>• The Aadhaar platform helps service providers authenticate identity of residents electronically, in a safe and quick manner, making service delivery more cost effective and efficient. According to the GoI and UIDAI, Aadhaar is not proof of citizenship.</li> <li>• However, UIDAI has also published a set of contingencies when the Aadhaar issued by it is liable for rejection. An Aadhaar with mixed or anomalous biometric information or multiple names in a single name (like Urf or Alias) can be deactivated. Aadhaar can also get deactivated upon non-usage of the same for three consecutive years.</li> </ul>
131.	d	<p><b>Modified FCRA rules: NGOs to give details of assets created from foreign funds</b></p> <p><i>Foreign Contribution Regulation Act (FCRA)</i></p> <ul style="list-style-type: none"> <li>• It is a law enacted by Parliament <b>to regulate foreign contributions (especially monetary donations) provided</b> by certain individuals or associations <b>to NGOs and others within India.</b></li> <li>• The Act, in its consolidating form, was <b>originally passed in 1976 and majorly modified in 2010.</b></li> <li>• The Act aims to <b>prevent foreign organisations from influencing electoral politics, social, political, economic, or religious discussions in India for wrong purposes and activities detrimental to the public interest.</b></li> <li>• The Act <b>falls under the purview of the Ministry of Home Affairs (MHA).</b></li> <li>• <b>'Foreign Contribution' means the donation, delivery or transfer made by any foreign source of any:</b> <ul style="list-style-type: none"> <li>○ <b>article</b> (not being an article given to a person as a gift for his/her personal use, the market value of which is not more than one lakh rupees);</li> <li>○ <b>currency</b> (whether Indian or foreign);</li> <li>○ security.</li> </ul> </li> <li>• <b>Contributions made by a citizen of India living in another country</b> (e.g. a Non-Resident Indian (NRI)) from his/her personal savings <b>through the normal banking channels, will not be treated as foreign contributions.</b></li> <li>• <b>Who can Receive Foreign Contributions? Any person can receive foreign contribution provided:</b> <ul style="list-style-type: none"> <li>○ The person <b>has a definite cultural, economic, educational, religious, or social programme;</b></li> <li>○ The person <b>must have obtained FCRA</b></li> </ul> </li> </ul>

		<p><b>registration/prior permission</b> from the Central Government and</p> <ul style="list-style-type: none"> <li>○ <b>Person includes</b> <ul style="list-style-type: none"> <li>■ an <b>individual</b>;</li> <li>■ a <b>Hindu Undivided Family</b>;</li> <li>■ an <b>association</b>;</li> <li>■ a <b>company registered under Section 8 of the Companies Act, 2013</b>;</li> </ul> </li> <li>● The <b>foreign contribution received has to be utilised only for the purpose</b> for which it has been received, and <b>not more than 20% of the foreign contribution received</b> in a financial year <b>can be utilised to defray administrative expenses</b>.</li> <li>● The <b>FCRA requires every person or NGO seeking to receive foreign donations to open a bank account for the receipt of foreign funds in the State Bank of India, Delhi</b>.</li> <li>● <b>Registration under FCRA:</b> <ul style="list-style-type: none"> <li>○ It is <b>mandatory for all such NGOs to register themselves under the FCRA</b>.</li> <li>○ The <b>applicant should not be fictitious or benami and should not have been prosecuted or convicted for indulging in</b> activities aimed at conversion through inducement or force, either directly or indirectly, from one religious faith to another.</li> <li>○ The <b>registration is initially valid for five years</b>, and it can be <b>renewed subsequently if they comply with all norms</b>.</li> <li>○ Registration <b>can be cancelled if an inquiry finds a false statement in the application</b>. Once the registration of an NGO is cancelled, <b>it is not eligible for re-registration for three years</b>.</li> <li>○ The <b>ministry also has the power to suspend an NGO's registration for 180 days pending inquiry and can freeze its funds</b>.</li> <li>○ <b>All orders of the government can be challenged in the High Court</b>.</li> </ul> </li> </ul>
132.	b	<p><b>How a small strand of RNA is key to fighting cancer</b> <i>microRNA (miRNA)</i></p> <ul style="list-style-type: none"> <li>● MicroRNAs (miRNAs) are a <b>class of non-coding RNAs</b> that play important roles <b>in regulating gene expression</b>.</li> <li>● <b>Gene expression refers to whether a particular gene is making too much, too little or the normal amount of its protein</b> at a particular time.</li> <li>● Molecules of miRNA are <b>found in cells and in the bloodstream</b>.</li> </ul>

- They are **typically composed of approximately 21 to 24 nucleotides**, making them much **smaller than messenger RNAs (mRNAs)**, which carry instructions for protein synthesis. Their small size allows them to bind to specific target mRNAs.
- **How does miRNA control gene expression?**
  - miRNA controls gene expression mainly **by binding with messenger RNA (mRNA) in the cell cytoplasm**.
  - Instead of being translated quickly into a protein, the **marked mRNA will be either destroyed and its components recycled, or it will be preserved and translated later**.
  - So, **if the level of a particular microRNA is underexpressed** (its level in the cell is abnormally low), **the protein it normally regulates may be overexpressed** (its level will be unusually high in the cell\*\*); if the microRNA is overexpressed\*\* (its level is unusually high), **its protein will be underexpressed** (its level will be unusually low).
- **Biological Functions:**
  - They play critical roles in various biological processes, including **development, cell differentiation, proliferation, and apoptosis** (programmed cell death).
  - They are involved in **maintaining cellular homeostasis and responding to environmental cues**.
- **Disease Implications:**
  - **Alteration in miRNA expression results in changes in the profile of genes** involving a range of biological processes, **contributing to numerous human disorders**.
  - With **high stability in human fluids**, miRNAs in the circulation are **considered as promising biomarkers for diagnosis**, as well as prognosis of disease.

#### RNA

- RNA, or **Ribonucleic Acid**, is a **molecule** that plays a central role in various biological processes, particularly in the **transfer of genetic information and the synthesis of proteins**.
- It is a **macromolecule similar to DNA** (Deoxyribonucleic Acid) **in many ways** but differs in its structure and functions.
- RNA is **composed of nucleotide units, just like DNA**. **Unlike DNA, however, RNA is most often single-stranded**.
- **Function:**
  - The primary function of RNA is to **convey genetic information from DNA and use that information to guide the synthesis of proteins**.
  - This process **involves transcription**, where a

		<p>complementary RNA strand is synthesized based on a DNA template, <b>and translation</b>, where the information encoded in the RNA is used to assemble a specific sequence of amino acids into a protein.</p> <p><i>mRNA</i></p> <ul style="list-style-type: none"> <li>• Messenger RNA (mRNA) is a <b>type of single-stranded RNA involved in protein synthesis</b>.</li> <li>• mRNA is <b>made from a DNA template during the process of transcription</b>.</li> <li>• The role of mRNA is to <b>carry protein information from the DNA in a cell's nucleus to the cell's cytoplasm</b>(watery interior), <b>where the protein-making machinery reads the mRNA sequence and translates each three-base codon into its corresponding amino acid</b> in a growing protein chain.</li> <li>• So mRNA really is a <b>form of nucleic acid which helps the human genome, which is coded in DNA, to be read by the cellular machinery</b>.</li> </ul>
133.	d	<p><i>Chincholi Wildlife Sanctuary</i></p> <ul style="list-style-type: none"> <li>• It is located around the Chandrampalli Dam in the <b>Kalaburagi district of Karnataka</b>.</li> <li>• It was declared a sanctuary in 2011.</li> <li>• It is the <b>first dry land Wildlife Sanctuary</b> in South India.</li> <li>• This is the only area in the Hyderabad Karnataka Region with rich floristic diversity</li> <li>• <b>Vegetation:</b> The Sanctuary has good <b>dry deciduous and Moist deciduous forest</b> in the core with Acacia and Teak plantations on the fringes.</li> <li>• <b>Flora:</b> Apart from <b>medicinal herbs</b> and trees, species like Red Sanders and Sandalwood are found abundantly.</li> <li>• <b>Fauna:</b> It is home Black Buck, Common Fox, Four-horned Antelope, Fruit bat, Hyena, Indian Wolf etc. Over 35 species of birds, including Black Drongo, Black-winged Kite, Blossom – headed Parakeet, Blue pigeon, Black-headed Oriole and Grey partridge are also found in this Sanctuary.</li> <li>• <b>Local Tribes:</b> Chincholi is also home to <b>Lambani Tandas</b>, a protected tribal community that lives in the forests in harmony with nature.</li> </ul>
134.	c	<p>Norman E. Borlaug Award</p> <ul style="list-style-type: none"> <li>• The award is endowed by the <b>Rockefeller Foundation</b>, the award is presented every <b>October in Des Moines, Iowa, US by the World Food Prize Foundation</b> to honor individuals under the age of 40 who have achieved remarkable, science-based accomplishments in <b>international agriculture and food</b></li> </ul>

		<p><b>production.</b></p> <ul style="list-style-type: none"> <li>The award is named after <b>Norman E. Borlaug</b>, the <b>father of the Green Revolution</b> and the <b>1970 Nobel Peace Prize laureate</b>.</li> <li>The award diploma incorporates the <b>image of Dr. Norman E. Borlaug at work in the fields of Mexico</b> and a <b>cash prize of USD 10,000</b>.</li> </ul>
135.	b	
136.	c	<ul style="list-style-type: none"> <li>Toto is a <b>Sino-Tibetan language spoken by the Toto tribal people</b>, primarily in parts of West Bengal bordering Bhutan.</li> <li>It is a minority language spoken by approximately <b>1,600 individuals</b>.</li> <li>Toto is traditionally a spoken language, and although a <b>script was developed in 2015 by Dhaniram Toto</b>, many Toto people still write in the Bengali script or use the Bengali language for written communication.</li> <li><b>They inhabit Totopara, West Bengal, near the border with Bhutan. The language is also spoken in other areas along the India-Bhutan border in Jalpaiguri district, West Bengal.</b></li> <li><b>Endangered Status:</b> Toto is considered a critically endangered language by UNESCO, with an estimated 1,000 speakers or fewer. Despite this endangered status, many families within the Toto community still use the language at home. It is often the primary language children learn at home, although they use Bengali when attending school.</li> <li><b>Language Preservation Efforts:</b> Researchers and members of the Toto community are aware of the endangered status of the language. The influence of other languages, particularly Nepali and Bengali, is increasing, posing a threat to Toto. Efforts are being made to document and preserve the language, including the Himalayan Languages Project's work on creating the first grammatical sketch of Toto.</li> <li><b>Anthropological Study:</b> The Anthropological Survey of India (AnSI) has conducted a study on the language of the Toto tribe. Despite the tribe's small population, the language is even more endangered. This underscores the urgency of preserving and revitalizing the Toto language.</li> </ul>
137.	c	<p><b>GJEPC appeals to industries to stop import of rough diamonds</b> <i>Gems and Jewellery Export Promotion Council (GJEPC)</i></p> <ul style="list-style-type: none"> <li>It is an <b>apex body of the Gem and Jewellery industry in India, sponsored by the Ministry of Commerce &amp; Industry, Government of India.</b></li> </ul>

		<ul style="list-style-type: none"> <li>● <b>Primary Function:</b> <ul style="list-style-type: none"> <li>○ It is primarily involved in <b>introducing Indian gem and jewellery products to the international market and promotes their exports.</b></li> <li>○ <b>To achieve this, the Council provides market information to its members</b> regarding foreign trade inquiries, trade and tariff regulations, rates of import duties, and information about Jewellery fairs and exhibitions.</li> </ul> </li> <li>● <b>Headquarters: Mumbai, Maharashtra</b></li> <li>● It has <b>regional offices across the country and with a strength of over 7,500 members.</b></li> <li>● <b>Other Functions:</b> <ul style="list-style-type: none"> <li>○ <b>Organising joint participation in international jewellery shows.</b></li> <li>○ <b>Inviting countries to explore areas of cooperation</b> in the supply of rough diamonds, coloured gemstones and sourcing of finished jewellery.</li> <li>○ <b>Identifying potential partners and buyers in international markets</b> through buyer-seller meets.</li> <li>○ <b>Executing the Kimberly Process Certification Scheme in the country, as the Nodal Agency</b> appointed by the Government of India.</li> <li>○ <b>Taking up relevant export-related issues with the Government,</b> Ministries, Regulatory Authorities and Agencies.</li> <li>○ <b>Undertaking image-building exercises through international advertisements,</b> publications and audio-visuals</li> <li>○ <b>Running training institutes</b> that impart manufacturing skills, technical and design excellence <b>in six cities – Mumbai, Delhi, Surat, Jaipur, Varanasi and Udupi.</b></li> <li>○ <b>Setting up Jewellery Parks</b> across the country.</li> </ul> </li> </ul> <p><i>Rough Diamonds</i></p> <ul style="list-style-type: none"> <li>● Rough Diamonds <b>refer to diamonds which are still in their natural state after being removed from the belly of the earth.</b></li> <li>● This is the <b>stage before they are actually cut or polished</b> in order to create the marvellous diamonds found in all of our unique jewellery.</li> </ul>
138.	c	<p><b>Dangerous rat-borne disease threatens southeastern US, warn scientists</b></p> <p><i>Angiostrongylus cantonensis</i></p>



		<ul style="list-style-type: none"> <li>● <b>Angiostrongylus cantonensis, commonly known as the rat lungworm, is a parasitic nematode (roundworm) that infects rodents, particularly rats.</b></li> <li>● It is <b>typically found in Southeast Asia and the Pacific Islands</b>, including Hawaii.</li> <li>● While <b>rats serve as the primary hosts for this parasite, humans and other animals, including snails and slugs, can become infected</b> as incidental hosts.</li> <li>● <b>Transmission:</b> It is <b>spread through rat faeces</b> and can infect <b>humans and other animals through produce or other food items.</b></li> <li>● <b>Impact on Humans:</b> <ul style="list-style-type: none"> <li>○ Once inside a human, the worm could <b>cause a rare brain infection known as eosinophilic meningitis.</b></li> <li>○ <b>Symptoms can include headaches, stiff neck, tingling, fevers, vomiting,</b> or painful feelings in the skin.</li> <li>○ <b>Most infections resolve spontaneously over time</b> without specific treatment because the <b>parasite cannot survive for long in the human body.</b></li> <li>○ The worm can, in <b>severe cases, cause coma or even death in humans,</b> and can also infect pets.</li> </ul> </li> <li>● <b>Treatment:</b> <ul style="list-style-type: none"> <li>○ There is <b>currently no specific treatment for the parasite.</b></li> <li>○ The most common types of <b>treatment are for the symptoms of the infection, such as pain medication for headache or medications</b> to reduce the body's reaction to the parasite.</li> </ul> </li> </ul>
139.	c	<p><b>20 Different Butterfly Species Identified And Recorded At Kamlang Tiger Reserve</b>  <i>Kamlang Tiger Reserve</i></p> <ul style="list-style-type: none"> <li>● <b>Location:</b> It is located in the southeastern part of <b>Lohit District in Arunachal Pradesh near the border with Myanmar.</b></li> <li>● It is <b>named after the Kamlang River, which flows through the reserve</b> and joins the Brahmaputra.</li> <li>● It is spread <b>between the famed Namdapha National Park on its south and Lang River on its north.</b></li> <li>● The <b>local inhabitants are Hishmi, Digaru and Mizo.</b></li> <li>● <b>Landscape:</b> It encompasses a diverse range of landscapes, including <b>dense tropical forests, grasslands, rivers, and hills.</b></li> <li>● <b>Climate:</b> It enjoys a <b>sub-tropical climate</b> as it falls within the</li> </ul>

		<p>sub-tropical zone.</p> <ul style="list-style-type: none"> <li>● <b>Vegetation:</b> <ul style="list-style-type: none"> <li>○ The vegetation may broadly be <b>classified into tropical, temperate and alpine.</b></li> <li>○ The <b>lower reaches and foothills of the region are covered with tropical wet evergreen forests</b>, while the <b>alpine vegetation dominates the higher altitudes.</b></li> </ul> </li> <li>● <b>Flora:</b> Common species of trees in the reserve include <b>Ammora wallichii (Amari), Gmelina arborea (Gamari), Terminalia chebula (Hillika)</b>, Canarium resiniferum (Dhuna) and many others.</li> <li>● <b>Fauna:</b> <ul style="list-style-type: none"> <li>○ <b>All four big cats, including the Snow Leopard, Clouded Leopard, Leopard and Tiger</b>, are the common inhabitants.</li> <li>○ <b>Certain endangered species, such as Himalayan Palm Civets, Leopard Cat, Slow Lories and Hoolock Gibbon</b>, can also be spotted in the sanctuary.</li> <li>○ Other species commonly found here are <b>Giant and Flying Squirrels, Hornbills, Deer, Civets</b>, Boar, Capped Langur, Stump Tailed Macaque etc.</li> </ul> </li> </ul>
140.	c	
141.	d	Carbon dioxide is Earth's most important greenhouse gas: a gas that absorbs and radiates heat. Unlike oxygen or nitrogen (which make up most of our atmosphere), greenhouse gases absorb heat radiating from the Earth's surface and re-release it in all directions—including back toward Earth's surface. The increasing amount of carbon dioxide in the air is slowly raising the temperature of the atmosphere because it absorbs the infrared part of the solar radiation.
142.	d	The Savanna biome has a wet/dry climate. Its Koppen climate group is Aw. The A stands for a tropical climate, and the w for a dry season in the winter.
143.	c	The religion of early Vedic Aryans was primarily of naturalistic polytheism (similar to primitive animism) as they venerated natural forces. They generally worshipped in the open air through yajnas.
144.	c	The GJEPC was established in 1966 by the Ministry of Commerce and Industry (India), it was one of several Export Promotion Councils started by the Government. It has its headquarters in Mumbai and Regional Offices in New Delhi, Kolkata, Chennai, Surat and Jaipur. The GJEPC was granted an autonomous status in 1998, it is the apex body for the gems and jewellery industry of India and represents

		almost 7,000 exporters. The Council presents issues to the Government and recommends policy intervention.
145.	c	Tatarstan republic Kazan, capital city, Tatarstan republic, western Russia. It lies just north of the Samara Reservoir on the Volga River, where it is joined by the Kazanka River. The city stretches for about 15 miles (25 km) along hills, which are much dissected by ravines.
146.	d	Lagrange points are positions in space where objects sent there tend to stay put. At Lagrange points, the gravitational pull of two large masses precisely equals the centripetal force required for a small object to move with them. These points in space can be used by spacecraft to reduce fuel consumption needed to remain in position.
147.	a	CRISPR-Cas9 is a genome editing tool that is creating a buzz in the science world. It is faster, cheaper and more accurate than previous techniques of editing DNA and has a wide range of potential applications.
148.	b	Motupalli was described as a flourishing port. Coins of Rajaraja of the Chola dynasty. Chinese coins of the Ming dynasty. European roulette and stamped ware indicate that the port existed since the 2nd century BCE and carried trade with Europe, China and South-East Asian Countries.
149.	b	Article 51 of the Constitution which is a Directive Principle of State Policy directs the state to promote international peace and security and maintain just and honorable relations between nations.
150.	c	The term monsoon generally refers to the seasonal reversal in atmospheric low-level circulations, particularly the surface winds and associated precipitation, resulting in a pattern of wet summers and dry winters.