

IAS GOOGLE



1.

Who is the author of the book 'The First Indian War of Independence'?

- (a) M K Gandhi
- (b) V D Savarkar.
- (c) Karl Marx.
- (d) Bipin Chandra.

2.

Consider the following statements regarding V D Savarkar

- 1. He founded the organization Free India Society.
- 2. Arrested in 1919 on charges of plotting an armed revolt against the Montagu Chelmsford reforms 1919.

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.

3.

Konkan Shakti is a Tri-service exercise between

- (a) India - Sri Lanka.
- (b) India - France.
- (c) India - USA.
- (d) India - UK.

4.

'Ryugu' which is recently seen in news refers to

- (a) An asteroid.
- (b) Fossil of a dinosaur.
- (c) A geological period in history in Indian subcontinent.
- (d) Place in Ukraine recently captured by Russia.

5.

Consider the following statements

- 1. Radio galaxies are driven by Thermal emissions.
- 2. Radio galaxies happen

through the interaction
between charged particles
and strong magnetic fields

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.

6.

In India, 'extended producer
responsibility' was introduced as
an important feature in which of
the following?

- (a) The Bio-medical Waste
(Management and Handling)
Rules, 1998
- (b) The Recycled Plastic
(Manufacturing and Usage) Rules,
1999
- (c) The e-Waste (Management and
Handling) Rules, 2011
- (d) The Food Safety and Standard
Regulations, 2011

7.

'Heimang' which is recently seen
in news is refers to

- (a) A Tree.
- (b) An mobile app to find
government facilities nearest to
their location.
- (c) A festival celebrated by the
Konyak Naga people
- (d) An Tibeto-Burmese ethnic
group in Arunachal Pradesh.

8.

Shinyuu Maitri is a military
exercise between

- (a) India - Japan
- (b) India - UAE
- (c) India - Indonesia
- (d) India - Mongolia

9.

Consider the following statements
regarding Khondalite

- 1. Khondalite is an igneous
rock.
- 2. It lacks mica in its

composition.

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.

10.

Consider the following statements.

1. Westerlies blow from subtropical low-pressure to subpolar high-pressure belts.
2. Westerlies of the southern hemisphere are more robust and constant than the westerlies of the northern hemisphere.

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

11.

Which of these were recommended by Punchhi Commission?.

1. Creation of a National Integration Council.
2. Amending Article 355.
3. Governor should be given a fixed tenure of five years.

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

12.

Easter Island is

- (a) An overseas department and region of France located in Indian Ocean.
- (b) An Chilean territory located in the Pacific Ocean.
- (c) Located in Scotland.

(d) Located in South China sea.

13.

Consider the following statements regarding Press Council of India

1. It is a statutory body.
2. It shall have the same powers as a Civil court.
3. Its Chairman is nominated by the Prime minister.

Select the correct answer using the code given below:

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

14.

Consider the following statements regarding 'Erythritol'

1. It is an artificial sweetener.
2. It causes blood platelets to clot very slowly.
3. It is poorly metabolized by the body.

Select the correct answer using

the code given below:

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

15.

Specific interaction between clownfish and sea anemone is

- (a) Commensalism
- (b) Mutualism
- (c) Predation
- (d) Amensalism

16.

Consider the following statements regarding the provisions of Article 324.

1. The Election Commission shall consist of the CEC and such number of other election commissioners, if any, as the Parliament by law may from time-to-time fix.
2. The President makes the

appointment of election commissioners on the advice of the PM.

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.

17.

'Sisupalgarh' recently seen in news refers to

- (a) An ancient fortified city in Odisha.
- (b) A Persian and Indo-Persian quadrilateral garden layout.
- (c) The fourth ruling dynasty of Magadha.
- (d) An armed operation in India against the Maoists

18.

Consider the following statements regarding Helium

1. It has the highest boiling

and melting points of any element.

2. Natural gas is the primary source of helium on Earth.
3. It is being produced by the decay of radioactive elements in the Earth's crust.

Select the correct answer using the code given below:

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

19.

Consider the following statements regarding dengue.

1. It is transmitted by the *Aedes aegypti* mosquito.
2. It suppresses bone marrow.

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.

20.

Consider the following statements regarding Cotton

1. Cotton is a semi-xerophyte crop.
2. *Gossypium arboreum* & *Gossypium herbaceum* are known as Asiatic cottons.

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.

21.

Consider the following statements

1. Black holes have masses that are greater than sun.
2. General theory of relativity predicted the existence of black holes.

Select the incorrect answer using

the code given below:

(a) 1 only.

(b) 2 only.

(c) Both 1 and 2.

(d) Neither 1 nor 2.

22.

What is the main object of protective discrimination?

(a) To give special advantages to particular group

(b) To raise a disadvantaged group to a level where they can compete with other sections of society footing on equal

(c) To give financial assistance to the poor

(d) To promote class interest.

23.

'Schwarzschild radius' which is recently seen in news is related to

(a) It is the boundary defining the region of space around a black hole.

(b) An air bubble of radius rises

from the bottom to the surface of a lake.

(c) The total distance from the nucleus of an atom to the outermost orbital of its electron.

(d) Radius of Nuclear Weapon Detonation.

24.

'Uperodon montanus' which is recently seen in news refers to

(a) Rodent.

(b) Bird.

(c) Reptile.

(d) Amphibian.

25.

How can an amendment in a list in the Seventh Schedule of the Constitution of India be initiated? If the Bill seeking amendment is passed in either House of Parliament by

(a) a majority of the total membership of that house.

(b) a majority of the total membership of that house and by

a majority of not less than two-thirds of the members of that House present and voting.

(c) (b) + above and the amendment shall require to be ratified by the Legislatures of States not less than one-half of the States.

(d) (b) + above and the amendment shall require to be ratified by Legislatures of States not less than two-thirds of the States.

26.

Kermadec Islands which is recently seen in news is located in

(a) New Zealand.

(b) South china sea.

(c) Indonesia.

(d) Japan.

27.

Consider the following statements regarding Seahorses

1. Seahorses are viviparous.
2. Male seahorses get pregnant and bear young.
3. They are classified as

vulnerable in the IUCN Red list.

Select the correct answer using the code given below:

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

28.

Sultanpur National Park is located in

- (a) Gujarat.
- (b) Uttarakhand.
- (c) Uttar Pradesh.
- (d) Haryana.

29.

Consider the following statements regarding Schengen Area

1. 23 of the 27 EU member states are a part of the Schengen Area.
2. Romania joined the Schengen area on January

1, 2023.

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.

30.

Consider the following statements regarding 'Scrub typhus'

1. It is a bacterial disease.
2. Scrub typhus is transmitted by a protozoa.

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.

Consider the following statements regarding High seas

1. The high seas begin at the border of countries' exclusive economic zones, which extend up to 100 km from coastlines.
2. All countries have a right to fish, ship, and do research in the High seas.

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.

32.

'Megha-Tropiques' which is recently seen in news refers to

- (a) An Indo-French Joint Satellite Mission
- (b) a celebration held by the Khasi tribe of Meghalaya
- (c) an extinct genus of a basal animal that lived during the late Ediacaran period.
- (d) a superbug genetically

engineered which breakdown hydrocarbons

33.

Consider the following statements regarding 'Phytoplanktons'

1. Warmer sea surface temperatures would increase Phytoplanktons.
2. They reduce global warming by absorbing carbon dioxide.
3. Excessive phytoplanktons could lead to eutrophication.

Select the correct answer using the code given below:

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

34.

On addition of salt to water, its

- I. boiling point increases.
- II. boiling point is not affected.

III. freezing point is not affected.

IV. the freezing point decreases.

The correct option(s) is/are

(a) I and IV

(b) II and IV

(c) II and III

(d) I and III

35.

Which one among the following is an example of chemical change?

(a) The melting of an ice cube

(b) The boiling of gasoline

(c) The frying of an egg

(d) Attraction of an iron nail to a magnet

36.

Point Calimere Wildlife Sanctuary is located in

(a) Meghalaya.

(b) Andaman & Nicobar islands.

(c) Tamil Nadu.

(d) Kerala.

37.

What was achieved by the Thirty-sixth Amendment Act of 1975?

(a) Sikkim became the 22nd State of the Indian Union

(b) It barred the jurisdiction of courts over laws relating to acquisition of property

(c) A Legislature and a Council of Ministers were provided for Arunachal Pradesh

(d) Resignations tendered by MPs or MLAs under coercion will not be accepted by the Speaker

38.

'Garra surendranathanii' refers to

(a) A Medicinal plant.

(b) An Endemic frog.

(c) A fish.

(d) The "Bengali" newspaper founded in 1862 by Surendranath Banerjee.

39.

Which of these actions by the Reserve Bank of India (RBI) may lead scheduled commercial banks to lend less money to their retail customers?

1. Reduction in Cash Reserve Ratio
2. Increase in Repo Rate
3. Increase in Statutory Liquidity Ratio

Select the correct answer code:

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

40.

Consider the following statements w.r.t. Marginal Standing Facility (MSF).

1. Marginal Standing Facility (MSF) is a window for scheduled banks to borrow overnight from the RBI in an emergency situation when interbank liquidity dries up completely.

2. Under MSF, banks are not allowed to use the securities that come under Statutory Liquidity Ratio (SLR) in the process of availing loans from RBI.

Which of the above statements is/are correct?

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

41.

Kessler syndrome refers to

- (a) Debris in Space.
- (b) Chromosomal aberrations.
- (c) Mongolian idiocy.
- (d) Inheritance of X - linked gene

42.

'Money illusion', a phrase coined by Keynes, is mainly caused by an ignorance of the real detrimental effect of

- (a) high unemployment
- (b) inflation
- (c) low interest rates
- (d) recession

43.

Consider the following statements regarding 'NISAR'

1. NISAR is a High Earth orbit observatory jointly developed by NASA and ISRO.
2. NISAR will map the entire globe in 12 weeks.

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.

44.

Consider the following statements.

1. Core inflation represents the long run trend in the

price level, including food and fuel inflation.

2. In measuring core inflation, transitory price changes are usually excluded.

Which of the above statements is/are correct?

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

45.

Consider the following statements regarding Nord Stream pipeline

1. The Nord Stream crosses the Exclusive Economic Zones (EEZs) of Finland and Sweden.
2. The pipeline crosses territorial waters of Denmark.

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.

46.

Beijing PFA is related to

(a) Women's empowerment

(b) Border dispute

(c) Conservation of wetlands

(d) International transport and transit corridor

47.

Which of the following is known as tear gas?

(a) Trichloro-methane

(b) Trichloro-ethane

(c) Trinitro-methane

(d) Trinitro-ethane

48.

Additional Grant is given by the Parliament to the executive when

(a) there is excess expenditure in a financial year considering the

amount granted for that service in the budget

(b) an unexpected demand upon the resources of India has arisen which cannot be stated with the details ordinarily given in a budget

(c) an extra expenditure upon some new service not contemplated in the budget for that year is sought

(d) the government seeks advance money before the enactment of the budget to meet current expenditures

49.

The actual liabilities of the Union government include which of the following

1. Loans taken for the recapitalisation of banks
2. Borrowings by PSUs
3. Capital expenditures of various Ministries.

Select the correct answer code:

(a) 1, 2

(b) 1 only

(c) 2, 3

(d) 1, 2, 3

50.

Yaoshang festival is celebrated in

(a) Manipur.

(b) Ladakh.

(c) Meghalaya.

(d) Nagaland.

51.

Consider the following statements regarding Tropical dry evergreen forests of India

1. It is a unique forest found only in Tamil Nadu and Kerala.
2. Here the rainfall occurs both during summer and winter monsoons

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.

52.

Consider the following statements regarding Meitei people

1. Meiteis are the dominant population of Nagaland in northeastern India.
2. They follow Ghotul which is a kind of live-in relationship.
3. They are predominantly Vaishnavite Hindus.

Select the correct answer using the code given below:

(a) 1 and 3.

(b) 2 and 3.

(c) 1, 2 and 3.

(d) 3 only.

53.

Consider the following statements regarding International Criminal Court (ICC)

1. It was created by the 1998 Rome Statute.

2. India is not a member of ICC.
3. The Judges are elected by the United Nations General Assembly and the Security Council.

Select the correct answer using the code given below:

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

54.

Consider the following statements

1. The institutions of Speaker and Deputy Speaker originated in India in 1921 under the provisions of the Government of India Act of 1919.
2. Whenever a Deputy Speaker is appointed as a member of a parliamentary committee, he automatically becomes its chairman.
3. When the Speaker presides

over the House, the Deputy Speaker can speak in the House, participate in its proceedings, and vote on any question before the House.

Select the correct answer using the code given below:

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

55.

Which of the following set of countries are members of BIMSTEC?

- (a) Bangladesh, Bhutan, Nepal, India, Sri Lanka and Laos
- (b) Bangladesh, Bhutan, Nepal, India, Sri Lanka, Thailand and Myanmar
- (c) Bangladesh, Bhutan, Nepal, India, Sri Lanka and Maldives
- (d) Bangladesh, Bhutan, Nepal, India, Myanmar, Taiwan, Sri

Lanka and Indonesia

56.

Consider the following statements regarding Propylene Glycol

1. It is a synthetic food additive.
2. It is used to absorb extra water.
3. It is used to create artificial smoke in fire-fighting training.

Select the correct answer using the code given below:

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

57.

Findex Report is released by

- (a) World Bank.
- (b) International Monetary Fund.
- (c) UNDP.
- (d) World Trade Organisation.

58.

Which of the following are classified as a natural disaster by the National Disaster Management Authority?

1. Drought
2. Pest attack
3. Frost and cold waves
4. Cloudburst
5. Landslip
6. Lightning

Select the correct answer using the code given below:

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

59.

'Hainan' is a place which is recently seen in news located in

- (a) China.
- (b) Japan.
- (c) Hong Kong.
- (d) Thailand.

60.

Consider the following statements regarding IBSA.

1. It's a movement for the global south.
2. It was formed in 2003 following the Brasilia Declaration.

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.

61.

Mount Merapi is located in

- (a) Indonesia.
- (b) Japan.
- (c) New Zealand.
- (d) Hawaii.

62.

How many times the word 'Morality' used in our constitution

?

- (a) 7.
- (b) 3.
- (c) 4.
- (d) 1.

63.

The term Foster's rule denotes

- (a) Theory pertaining to the variation in the size of the body of species which are influenced by the availability of environmental resources.
- (b) Overpopulation of space with objects and debris.
- (c) A state in which a material shows absolutely zero electrical resistance.
- (d) An upwards swelling of soil during freezing conditions.

64.

Consider the following statements regarding Hypersonic cruise missile

1. Hypersonic cruise missile

is powered by air breathing high speed engines or 'scramjets'

2. It leaves the Earth's atmosphere and then plunges back into it.

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.

65.

Consider the following statements regarding MAIA Mission

1. It is a joint mission between NASA and ISRO.
2. Is an effort to investigate the health impacts of tiny airborne particles polluting some of the world's most populous cities.
3. It is the first mission by NASA to benefit societal health.

Which of the statements given

above is/are correct?

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

66.

Dudhwa Tiger Reserve is located in

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

67.

Consider the following statements regarding Charaideo Maidams

1. It enshrines the mortal remains of the members of the Chalukya dynasty.
2. It is declared as an UNESCO's World Heritage Site.

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.

68.

Consider the following statements regarding Japanese Encephalitis

1. It is a viral infection
2. It is caused by a Plasmodium that belongs to the same genus as malaria.
3. The disease is transmitted to humans through bites from infected mosquitoes of the Aedes mosquitoes.

Select the correct answer using the code given below:

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

69.

Consider the following pairs

Buddhist Council	Patron
1st Buddhist Council	Ajatashatru
2nd Buddhist Council	Kalashoka
3rd Buddhist Council	Kanishka
4th Buddhist Council	Ashoka

Which of the above pairs are true ?

- (a) only one pair is true.
- (b) only two pairs are true.
- (c) only three pairs are true.
- (d) None of the pairs are true.

70.

During a thunderstorm, the thunder in the skies is produced

by the

1. meeting of cumulonimbus clouds in the sky
2. lightning that separates the nimbus clouds
3. violent upward movement of air and water particles

Select the correct answer using the codes given below:

- (a) 1 only
- (b) 2 and 3
- (c) 1 and 3
- (d) None of the above produces the thunder

71.

Consider the following statements regarding Indian Wild Ass

1. World's last population of Indian Wild Ass is restricted to sunderban, Gujarat.
2. It is classified as critically 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.

72.

Tashiding Monastery is located in

- (a) Himachal Pradesh.
- (b) Uttarakhand.
- (c) Sikkim.
- (d) Ladakh.

73.

Consider the following statements regarding Biopesticides.

1. Biopesticides generally affect the target pest and closely related organisms.
2. Biopesticides are usually inherently less toxic than conventional pesticides.
3. Bacillus thuringiensis is an example of biopesticide.

Which of the above statements

is/are correct?

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

74.

Which of the following Air Defence systems are correctly matched?

- 1. Iron Dome: Israel
- 2. S400: Russia
- 3. THAAD: USA
- 4. Iron Beam: India

Select the correct answer code:

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

75.

Match the Following

- 1. Washington Convention -
A. Hazardous Wastes and
Their Disposal
- 2. London Convention - B.

Marine Pollution

- 3. Bonn Convention - C.
Migratory Species
- 4. Basel Convention - D.
Trade in Endangered
Species

Select the correct answer code:

- (a) 1-D, 2-C, 3-B, 4-A
- (b) 1-D, 2-B, 3-C, 4-A
- (c) 1-B, 2-D, 3-C, 4-A
- (d) 1-B, 2-C, 3-A, 4-D

76.

Sanjay Dubri Tiger Reserve is located in

- (a) Maharashtra.
- (b) Madhya Pradesh.
- (c) Gujarat.
- (d) Rajasthan.

77.

Swapnil Tripathi vs Supreme Court of India 2018 Case, sometimes seen in India is related to

- (a) Uniform Civil Code
- (b) Validity of Aadhar
- (c) Rights of LGBT community
- (d) Live streaming of court cases

78.

Consider the following statements regarding Coronal Mass Ejections (CMEs).

1. Coronal Mass Ejections (CMEs) are large expulsions of plasma and magnetic field from the Sun's corona.
2. They expand in size as they propagate away from the Sun.

Which of the above statements is/are correct?

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

79.

Consider the following statements regarding the Constitution bench

of the Supreme Court.

1. Constitution Benches are set up on an ad hoc basis.
2. Matters related to the constitutionality of Amendment of an Act of the Parliament are referred to the Constitution Bench by the Supreme Court.

Which of the above statements is/are correct?

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

80.

Which of the following are the sites of Indus Valley Civilisation?

1. Manda
2. Rakhigarhi
3. Sutkagen Dor
4. Daimabad

Select the correct answer code:

- (a) 1, 2, 3

(b) 2, 3, 4

(c) 2, 3

(d) 1, 2, 3, 4

81.

Consider the following statements regarding interest coverage ratio.

1. The interest coverage ratio is a debt and profitability ratio used to determine how easily a company can pay interest on its outstanding debt.
2. For calculating interest coverage ratio, a company's earnings before interest and taxes is considered.
3. Generally a lower value of interest coverage ratio shows greater ability of a company to meet its interest obligations from earnings.

Which of the above statements is/are correct?

(a) 1, 2

(b) 2, 3

(c) 1, 3

(d) 1, 2, 3

82.

Consider the following pairs:

Pass

Location

1. Jelepla Pass Jammu and Kashmir
2. Bom Di La Arunachal Pradesh
3. Banihal Pass Himachal Pradesh
4. Niti Pass Uttarakhand
5. Bara Lacha La Sikkim

Which of the above are correctly matched?

(a) 2, 4

(b) 1, 2, 4

(c) 1, 3, 5

(d) 1, 2, 3, 4, 5

83.

Consider the following statements regarding Green Hydrogen.

1. Green Hydrogen is the

hydrogen generated through renewable energy sources and the carbon generated from the process is captured and stored without dispersing it in the atmosphere.

2. The major challenge in the usage of green hydrogen will be its storage, because it requires large volumes for its storage.

Which of the above statements is/are correct?

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

84.

Consider the following minerals:

- 1. Bentonite
- 2. Chromite
- 3. Kyanite
- 4. Sillimanite

In India, which of the above is/are officially designated as major

minerals?

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

85.

Consider the following statements regarding Sea Weeds.

- 1. It is the common name for countless species of marine plants and algae.
- 2. Sea weeds are detrimental to human health and consumption of the same should be avoided.
- 3. Sea weeds does not grow in flowing waters like rivers and streams.

Which of the above statement is/are correct?

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

86.

Which one of the following National Parks has a climate that varies from tropical to subtropical, temperate and arctic?

- (a) Khangchendzonga National Park
- (b) Nandadevi National Park
- (c) Neora Valley National Park
- (d) Namdapha National Park

87.

Consider the following pairs:

- 1. Nokrek Biosphere Reserve:
Garo Hills
- 2. Loktak (Loktak) Lake:
Barail Range
- 3. Namdapha National Park:
Dafla Hills

Which of the above pairs is/are correctly matched?

- (a) 1 only
- (b) 2 and 3 only
- (c) 1, 2 and 3
- (d) None

88.

Consider the following statements regarding Dragon fruit

- 1. It belongs to the Cactaceae family.
- 2. Its origin in China.
- 3. World's largest producer and exporter of dragon fruit is Vietnam.

Select the correct answer using the code given below:

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

89.

Strait of Dardanelles connects

- (a) Aegean Sea and the Black Sea.
- (b) Aegean Sea and Sea of Marmara.
- (c) Black Sea and Mediterranean sea.
- (d) Black Sea and Caspian sea.

90.

Consider the following statements regarding Wild Ass Sanctuary

1. It is located in Assam.
2. It is home to a sizeable population of Rabari and Bharwad tribes.
3. The Sanctuary area is covered with mixed deciduous forest.

Select the correct answer using the code given below:

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

91.

India has adopted the Bolam rule. 'Bolam Rule' is related to

- (a) Medical Negligence.
- (b) Leader of Opposition.
- (c) Appointment of Judges
- (d) Atmospheric pollution

92.

'Trindade Island' which is recently seen in news is located in

- (a) South China sea.
- (b) Pacific ocean.
- (c) South Atlantic Ocean.
- (d) Black sea.

93.

Consider the following statements

1. India's Antiquities and Art Treasures Act (AATA), that is in vogue, was enacted in British India.
2. All the Union, State and Concurrent Lists of the Schedule VII of the Indian Constitution deal with the country's heritage.

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.

94.

Which of the following countries shares border with Baltic Sea?

1. Russia
2. Sweden
3. Belarus
4. Norway

Select the correct answer code:

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

95.

Consider the following statements regarding Karnala Bird Sanctuary

1. The Sanctuary area is covered with mixed deciduous forest.
2. Globally threatened and endemic birds like Long Billed Vultures, Malabar Gray Hornbill are found in Karnala Bird Sanctuary.

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.

96.

Consider the following statements regarding Horseshoe crab

1. Major concentration of the animal is found in Sunderban delta.
2. It is under Schedule 4 of Wildlife Protection Act, 1972.

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.

97.

Which of the following pairs is/are correctly matched?

Spacecraft Purpose

1. Cassini-Huygens: To study Saturn and its moons.
2. Akatsuki : Mapping and investigating the Mercury
3. Magellan: To study the atmosphere of Venus.

Select the correct answer using the code given below:

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

98.

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 Vindhya 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

99.

Bumchu festival is celebrated in

- (a) Arunachal Pradesh.
- (b) Manipur.
- (c) Meghalaya.
- (d) Sikkim.

100.

Which of the following countries shares border with Red Sea?

1. Oman.
2. Egypt.
3. Djibouti.
4. Saudi Arabia.

Select the correct answer code:

- (a) 2, 4
- (b) 1, 2
- (c) 2, 3, 4

(d) 1, 3

101.

Consider the following statements regarding Keibul Lamjao National Park.

1. It is known for phumdis.
2. The park is a combination of wetland, terrestrial and aquatic.
3. It is the natural habitat of Sangai deer.

Select the correct answer using the code given below:

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

102.

Consider the following statements regarding Parkinson's disease

1. It is caused by the degeneration of nerve cells.
2. Affected nerve cells lose the ability to produce dopamine.
3. Women are more likely to

be affected by Parkinson's than men.

Select the correct answer using the code given below:

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

103.

Consider the following statements regarding Stromatolites

1. Stromatolites are layered sedimentary rocks formed by microorganisms, usually found in deep-ocean waters.
2. In India Stromatolite Park in India located in Rajasthan.

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.

104.

The Zawar mines in Udaipur is famous for which of the following metals?

(a) Mica.

(b) Zinc.

(c) Iron ore.

(d) Manganese.

105.

With reference to the United Nations Convention on the Law of Sea, consider the following statements:

1. A coastal state has the right to establish the breadth of its territorial sea up to a limit not exceeding 12 nautical miles, measured from baseline determined in accordance with the convention.
2. Ships of all states, whether coastal or land-locked, enjoy the right of innocent passage through the territorial sea.

3. The Exclusive Economic Zone shall not extend beyond 200 nautical miles from the baseline from which the breadth of the territorial sea is measured.

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

106.

Consider the following statements regarding Hindu Succession Act, 1956

1. The Dayabhaga school of Hindu law codified as the Hindu Succession Act, 1956.
2. This recognised only males as legal heirs for succession and inheritance of property.
3. Buddhists, Sikhs, Jains and followers of Arya Samaj, Brahmo Samaj, are

also considered Hindus for this law.

Select the correct answer using the code given below:

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

107.

Select the correct order regarding highest coverage of forest in India

- (a) Madhya Pradesh > Arunachal Pradesh > Odisha > Chhattisgarh
- (b) Madhya Pradesh > Arunachal Pradesh > Chhattisgarh > Odisha
- (c) Arunachal Pradesh > Madhya Pradesh > Chhattisgarh > Odisha
- (d) Arunachal Pradesh > Madhya Pradesh > Chhattisgarh > Odisha

108.

Global Terrorism Index is released by

- (a) Amnesty International.

(b) Institute for Economics and Peace.

(c) United Nation Security Council.

(d) Financial Action Task Force.

109.

The term Candida Auris which is recently seen in news refers to

- (a) An rodent which is endemic to the temperate forests of the Himalayas
- (b) Multi-drug resistant fungus
- (c) Auroras on Mars
- (d) Highest mountain on Venus

110.

In the northern hemisphere, the longest day of the year normally occurs in the:

- (a) First half of the month of June
- (b) Second half of the month of June
- (c) First half of the month of July
- (d) Second half of the month of

July

111.

In the context of which one of the following are the terms 'pyrolysis and plasma gasification' mentioned?

- (a) Extraction of rare earth elements
- (b) Natural gas extraction technologies
- (c) Hydrogen fuel-based automobiles
- (d) Waste-to-energy technologies

112.

Consider the following statements regarding Torrefaction

1. Torrefaction converts biomass in the absence of oxygen
2. It produces bio-oils & biochar.

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.

113.

Consider the following statements regarding Santalum album

1. It is a is a Moist Deciduous Forests species
2. It is classified as Vulnerable 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.

114.

Consider the following pairs

Mudras	Symbolize s
1. Anjali	constant

Mudra	cycle of birth, death, and rebirth
2. Vitarka Mudra	transmission of knowledge and the communication of the Buddha's teachings.
3. Varada Mudra	generosity, compassion, and the granting of wishes.
4. Jnana Mudra	unity of individual consciousness with the universal consciousness
5. Karana Mudra	respect, greeting,

	and gratitude.
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Which of the following pairs are correct?

- (a) Only one pair is correct.
- (b) Only two pairs are correct.
- (c) Only three pairs are correct.
- (d) All the pairs are correct.

115.

Consider the following statements regarding Terahertz waves

1. Terahertz waves fall between infrared waves and microwaves on the electromagnetic spectrum.
2. These waves are extremely large and there's a huge amount of free spectrum up there that would allow for spectacular data rates.

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.

116.

Which of the following are considered factors of World Happiness Index?

1. GDP
2. life expectancy
3. generosity
4. social support
5. freedom
6. corruption

Select the correct answer using the code given below:

- (a) 1, 2, 5, 6.
- (b) 2, 3, 4, 5, 6.
- (c) 1, 2, 4, 5, 6.
- (d) All the above.

117.

Which of the following gives 'Global Gender Gap Index' ranking to the countries of the world?

- (a) World Economic Forum

(b) UN Human Rights Council

(c) UN Women

(d) World Health Organization

118.

Lord Buddha's image is sometimes shown with the hand gesture called 'Bhumisparsha Mudra'. It symbolizes

(a) Buddha's calling of the Earth to watch over Mara and to prevent Mara from disturbing his meditation

(b) Buddha's calling of the Earth to witness his purity and chastity despite the temptations of Mara

(c) Buddha's reminder to his followers that they all arise from the Earth and finally dissolve into the Earth, and thus this life is transitory

(d) Both the statements (a) and (b) are correct in this context

119.

Which of the following factors constitutes the best safeguard of liberty in a liberal democracy?

- (a) A committed judiciary
- (b) Centralization of powers
- (c) Elected government
- (d) Separation of powers

120.

Consider the following statements regarding Irradiation.

1. It involves exposing the produce to gamma radiation & heat to kill bacteria.
2. Red onion is more suitable for irradiation than Kharif variety of onion.

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.

121.

Recently India inaugurates Asia's largest 4-metre International Liquid Mirror Telescope at

Devasthal in Uttarakhand.

Consider the following statements

1. This telescope uses metal mercury.
2. It is the first optical survey telescope in India.

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.

122.

Dachigam National Park is located in

- (a) Himachal Pradesh.
- (b) Ladakh.
- (c) Jammu & Kashmir.
- (d) Arunachal Pradesh.

123.

Consider the following statements regarding Hangul

1. It is endemic to Kashmir

and surrounding areas.

2. It is classified as Critically 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.

124.

Consider the following statements regarding Mahim Fort

1. The fort was built by Maharaja Pratapbimb of the Rajput dynasty.
2. It is located in Maharashtra.

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.

125.

Consider the following statements regarding Right to be Forgotten.

1. The "Right to be Forgotten" is the right to remove or erase content on the internet so that it's not accessible to the public at large.
2. The Information Technology Rules, 2021 explicitly mentions about this right.
3. The Right to be Forgotten is an Indian innovation, provided by the Supreme Court in the Singhal v. Union of India case.

Which of the above statements is/are correct?

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

126.

Consider the following statements regarding G20 grouping.

1. The European Union as a whole is a member of the G20.
2. The first G20 meeting took place right after the 2012 Eurozone financial crisis.

Which of the above statements is/are correct?

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

127.

Consider the following statements

1. The Finance Bill, which only contains provisions related to tax proposals, would be a Money Bill.
2. A Bill that contains some provisions related to taxation or expenditure but also covers other matters would be considered a

Financial Bill.

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.

128.

Consider the following statements regarding Securities Transaction Tax (STT)

1. It is levied and collected by the central government of India.
2. STT is not applicable to off-market transactions or to commodity or currency transactions.

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.

129.

Consider the following statements regarding MIIRA scheme, recently seen in news.

1. It is a global initiative proposed by India.
2. It will be aimed at coordinating millet research programmes at the international level.
3. The United Nations has declared 2023 as the International Year of Millets, the proposal for which was moved by India.

Which of the above statements is/are correct?

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

130.

Consider the following statements regarding Sarus Crane

1. It is the tallest flying bird in

the world.

2. The sarus crane is listed in Schedule IV of the Wildlife Protection Act of 1972
3. It is classified as vulnerable in IUCN Red list.

Select the correct answer using the code given below:

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

131.

With reference to the Indian Renewable Energy Development Agency Limited (IREDA), which of the following statements is/are correct?

1. It is a Public Limited Government Company.
2. It is a Non-Banking Financial Company.

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

132.

Consider the following statements

1. Western Disturbances are a series of cyclonic storms that originate in the Arctic ocean.
2. They create a low-pressure storm systems, that help farmers in India grow their rabi crop.
3. They travel to India mostly between December and April.

Select the correct answer using the code given below:

(a) 1 and 2.

(b) 2 and 3.

(c) 1 and 3.

(d) 1, 2 and 3.

133.

Consider the following statements

regarding Moray Eels.

1. Moray Eels occur in all tropical and subtropical seas.
2. They live in shallow water among reefs and rocks.
3. They are classified as Vulnerable in IUCN Red list.

Select the correct answer using the code given below:

(a) 1 and 2.

(b) 2 and 3.

(c) 1 and 3.

(d) 1, 2 and 3.

134.

Abel prize is given for

- (a) It is awarded annually to honor a living architect or architects.
- (b) It is awarded to work that the built environment.
- (c) It is awarded to work which has produced consistent and significant contributions to

humanity.

(d) It recognizes pioneering achievements in mathematics

135.

The Governor-General of India who initiated the introduction of English in India was

- (a) Lord Bentinck
- (b) Lord Hastings
- (c) Lord Curzon
- (d) Lord Macaulay

136.

Which of the following fuels has the highest calorific value (kJ/kg)?

- (a) diesel
- (b) Petrol
- (c) Methane
- (d) Hydrogen

137.

Consider the following statements regarding Kanheri caves

1. The earliest reference to

Kanheri is ascribed to Fa-Hein who visited India during 399-411 CE.

2. The Kanheri Caves are located in the forests of the Sanjay Gandhi National Park.

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.

138.

How many times Jawaharlal Nehru became the President of INC?

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

139.

Aravali Mountain Range spans through which of the following

states?

1. Gujarat.
2. Delhi.
3. Rajasthan.
4. Haryana.

Select the correct answer using the code given below:

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

140.

Pineapple Express phenomenon which is recently seen in news refers to

- (a) a strong atmospheric river builds up in the tropical Pacific around Hawaii.
- (b) Tsunamis occur at equatorial regions.
- (c) occurs when effective therapies for a condition are rejected.
- (d) Shortwave radio communication of the aircraft

flying over polar regions interrupted.

141.

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

142.

Consider the following statements regarding 'Earth Hour':

1. It is an initiative of UNEP and UNESCO.
2. It is a movement in which the participants switch off the lights for one hour on a certain day every year.
3. It is a movement to raise the awareness about the climate change and the need to save the planet.

Which of the statements given above is/are correct?

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

143.

Consider the following statements regarding Rubber Plantations in India

1. It is a native to Amazon basin.
2. India is the world's second largest producer after Indonesia.

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.

144.

Amchang Wildlife Sanctuary is located in

- (a) Assam.
- (b) Manipur.
- (c) Meghalaya.
- (d) Arunachal Pradesh.

145.

Spitsbergen Island which is

recently seen in news located in

- (a) Norway.
- (b) Greenland.
- (c) New Zealand.
- (d) Japan.

146.

Consider the following statements

1. Chambal River is a tributary of the Yamuna River in central India, and forms part of the greater Gangetic drainage system.
2. Chambal River flows through Uttar Pradesh, Haryana and Rajasthan.

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.

147.

Consider the following statements

1. Second-generation GM crops involve enhanced quality traits, such as higher nutrient content.
2. "Golden Rice," one of the

very first GM crops, is biofortified to address vitamin c deficiency.

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.

148.

Consider the following statements regarding BMI

1. A person's micro-nutritional status and body fat cannot be determined through BMI.
2. Person's age is not required for calculating BMI

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.

149.

World Cities Report 2022, was released by

- (a) UNESCO

- (b) World Economic Forum
- (c) World Bank
- (d) UN Habitat

150.

Consider the following statements.

1. World Trade Organization (WTO) determines 'developed' and 'developing' countries based on its per capita GDP ratio.
2. WTO provides assistance to developing, least-developed and low-income countries in transition to adjust to WTO rules through technical cooperation and training.

Which of the above statements is/are correct?

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

ANSWERS

1.	c	<p>Karl Marx had published an article named 'The Indian Revolt' in the New-York Tribune in 1857 and later went on to write the book 'The First Indian War of Independence 1857-59'</p> <p>V. D. Savarkar had published the Indian War of Independence in 1909.</p> <p>India's Struggle for Independence 1857-1947 is written by Bipin Chandra.</p>
2.	a	<ul style="list-style-type: none"> ● Founded a secret society called Abhinav Bharat Society. Went to the United Kingdom and was **involved with organizations such as India House and the Free India Society. He was the president of Hindu Mahasabha from 1937 to 1943. Savarkar wrote a book titled 'The History of the War of Indian Independence' in which he wrote about the guerilla warfare tricks used in 1857 Sepoy Mutiny. He also wrote the book 'Hindutva: who is hindu?'. ● Trial and Sentences: <ul style="list-style-type: none"> ○ Arrested in 1909 on charges of plotting an armed revolt against the Morley-Minto reform (Indian Councils Act 1909). ○ Arrested in 1910 for his connections with the revolutionary group India House. ○ One of the charges on Savarkar was abetment to murder of Nashik Collector Jackson and the second was waging a conspiracy under Indian Penal Code 121-A against the King emperor. ○ Following the two trials, Savarkar was convicted and sentenced to 50-years imprisonment also known as Kala Pani and transported in 1911 to the Cellular Jail in the Andaman and Nicobar Islands. ● Death: He died on 26th February 1966 due to fasting on his own wish of

		death.
3.	d	<p>India and the United Kingdom:</p> <ul style="list-style-type: none"> ● Konkan Shakti Tri services exercise ● Ajeya warrior Army exercise
4.	a	<ul style="list-style-type: none"> ● It is a Japanese spacecraft that studied the asteroid Ryugu, collected samples, and brought them to Earth for analysis. ● It was the first to deploy rovers to operate on an asteroid. ● Mission Objectives: ● To clarify the origin and evolution of the Solar System, including the beginnings of life. ● To establish deep space exploration technology by taking on new challenges. ● It was launched by the Japan Aerospace Exploration Agency (JAXA) in December 2014. ● It arrived at asteroid Ryugu on June 2018, collected samples from the asteroid during two touchdowns in 2019, and delivered the sample capsule back to the Earth on December 2020. ● After delivering the capsule, the spacecraft continued on to a new mission. This new phase is referred to as the “Extended Mission”, with a new target destination of the small asteroid, 1998 KY26. ● Hayabusa2 is a follow-up to Japan’s original Hayabusa mission, which was the first spacecraft to take samples from an asteroid, and was also the first mission to successfully land and take off from an asteroid. It returned samples from asteroid 25143 Itokawa to Earth on June 13, 2010.

5.	b	<ul style="list-style-type: none"> ● Radio Galaxies, also known as radio-luminous galaxies or radio-loud galaxies, are a particular type of active galaxy that emits more light at radio wavelengths than at visible wavelengths. ● These happen through the interaction between charged particles and strong magnetic fields related to supermassive black holes at the galaxies' center. ● Radio galaxies are driven by non-thermal emissions. ● They are much bigger than most of the other galaxies in the universe. ● There are two broad classes of radio galaxies: ● Core-halo radio galaxies: ● They exhibit radio emission from a region concentrated around the nucleus of the galaxy. ● The region of radio emission is comparable in size to the optically visible galaxy. ● Lobed radio galaxies: ● They display great lobes of radio emission extending, in some cases, for millions of light years beyond the optical part of the galaxy. ● Some radio galaxies have a single lobe, but more often, the lobes are double, arrayed on both sides of the optical galaxy.
6.	c	
7.	a	<ul style="list-style-type: none"> ● The Heimang tree grows widely in Manipur and other north-eastern regions ● Its fruit have a citrus-like tartness and, it is packed with nutrients such as polyphenols, flavonoids, and antioxidants. ● Traditional healers of Manipur called Maibas or maibis, prescribe heimang for common gastrointestinal problems like diarrhoea and dysentery. ● It is also recommended to eat water-soaked fruit for indigestion and stomach ulcer.

		<ul style="list-style-type: none"> • The research found that compounds isolated from the stem of the heimang tree can significantly suppress HIV-1 activity in vitro. • Local communities in the state also use heimang leaves to prepare a herbal shampoo called chinghi by boiling them with rice water. <p>https://www.downtoearth.org.in/news/food/savour-the-tang-manipur-s-heimang-is-a-versatile-ingredient-in-asian-cuisines-and-packs-a-nutritional-punch-87076</p>
8.	a	
9.	d	<p>The Archaeological Survey of India (ASI) stumbled upon a 1,300-year-old stupa in a mining site in Odisha's Jajpur district.</p> <ul style="list-style-type: none"> • The site is being used for supplying Khondalite stones to the 12th Century Shree Jagannath Temple in Puri <p>Features:</p> <ul style="list-style-type: none"> • A stupa could be 5-metre tall • May belong to the 7th or 8th century <p>What is a Khondalite Stone?</p> <ul style="list-style-type: none"> • Khondalite (named after the Khond tribe of Odisha and Andhra Pradesh) is a foliated metamorphic rock • It is also called Bezwada Gneiss and Kailasa Gneiss • These stones were widely used in ancient temple complexes. • Khondalite is a type of metamorphic rock that is found in the Eastern Ghats region of India, particularly in the state of Odisha. It is named after the Khondalite Group of rocks, which is believed to have formed around 1.6 billion years ago during the Proterozoic era. Khondalite is primarily composed of feldspar, quartz, and mica, and has a distinct pinkish-grey coloration. It is commonly used as a decorative stone in construction and is

		<p>particularly prized for its durability and resistance to weathering. Khondalite stones were widely used in ancient temple complexes. They are proposed to be used widely to maintain aesthetic value of some projects such as heritage security zone, Jagannath Ballav pilgrim centre, etc.</p>
10.	b	<ul style="list-style-type: none"> • The westerlies are the winds blowing from the sub-tropical high pressure belts towards the sub polar low pressure belts. • They blow from south-west to north-east in the northern hemisphere and north-west to south-east in the southern hemisphere. • The westerlies of the southern hemisphere are stronger and persistent due to the vast expanse of water, while those of the northern hemisphere are irregular because of uneven relief of vast land-masses. • The westerlies are best developed between 40° and 65°S latitudes. These latitudes are often called Roaring Forties, Furious Fifties, and Shrieking Sixties – dreaded terms for sailors. • The poleward boundary of the westerlies is highly fluctuating. There are many seasonal and short-term fluctuations. These winds produce wet spells and variability in weather.
11.	b	<p><u>Punchhi Commission</u></p> <ul style="list-style-type: none"> • The Government of India constituted a Commission on Centre-State Relations under the chairmanship of Justice Madan Mohan Punchhi. • Aim: To examined and reviewed the working of the existing arrangements between the Union and States, various pronouncements of the Courts in regard to powers, functions and responsibilities in all spheres including legislative relations, administrative relations, role of governors, emergency provisions, financial relations, economic and social planning, Panchayati Raj institutions, sharing of resources including inter-state river water etc."

- It was **established on 27th of April, 2007**.

Highlights

- To **investigate what role, duty, and authority the Centre** might have during major and long-term outbreaks of communal violence, caste violence, or other social disputes.
- **Other facets of the Centre-State relationship**, such as taxes and river connections, will be examined.
- Examine whether a **central law enforcement agency is required** to conduct suo motu investigations into crimes with inter-State or worldwide ramifications that pose a serious threat to national security.
- To investigate the necessity and utility of distinct taxes for facilitating interstate trade and creating a unified domestic market.
- To **promote the concept of independent planning and budgeting** at the district level and linking Central assistance of various kinds with the performance of the States.
- To study the **feasibility of supporting legislation under Article 355**.
- To investigate the Centre's role, responsibility, and authority in promoting successful devolution of powers and autonomy to Panchayati Raj institutions and local bodies in relation to the States.

Recommendations

- Considerations specified in the terms of reference of the Finance Commission should be even handled as between the Centre and the States. There **should be an effective mechanism to involve the States in the finalization of the terms of reference** of the Finance Commissions.
- It was **concerned about the increase in the revenue collected through cesses and surcharges**. It recommended that the Central Government should review all the existing cesses and surcharges with a view to bringing down their share in the gross tax revenue.
- Because of the close linkages between the plan and non-plan expenditure, an **Expert Committee may be appointed to look into the issue of**

distinction between the plan and non-plan expenditure.

- There should be much better coordination between the Finance Commission and the Planning Commission. The synchronization of the periods covered by the Finance Commission and the five-year plan will considerably improve such coordination. The Punchhi Commission recommended that another attempt be made to synchronize the periods.
- The 12th Finance Commission recommended that the **Finance Commission Division in the Ministry of Finance should be converted into a full-fledged department, serving as the permanent secretariat for the Finance Commissions.** The Punchhi Commission endorsed this recommendation of the 12th Finance Commission.

1. **On Governor**

- He **should be from outside the State and a detached figure not too connected with the local politics** of the State. He should be a person who has not taken an active part in politics, generally and particularly in the recent past at least two years prior to his appointment.
- He must be **appointed after consultation with the Chief Minister** of the State concerned.
- A committee should be formed that is entrusted with the task of appointment of Governors. This committee may comprise the Prime Minister, the Home Minister, the Lok Sabha's Speaker and the concerned Chief Minister of the State.
- Deletion of the Doctrine of Pleasure from the Constitution.
- His **tenure of office must be guaranteed** and should not be disturbed except extremely compelling reasons and if any action is to be taken against him. He must be given a **reasonable opportunity for showing cause against the grounds on which he is sought to be removed.** In case of such termination or resignation by the Governor, the Government should lay before both the Houses of Parliament a statement explaining the circumstances leading to such removal or resignation, as the case may be.
- Recommendation of provision for the Governor's impeachment by State

Legislature.

2. **In the context of Article 355 and Article 356**

- The report also advised that Article 355 and Article 356 of the Constitution should be amended. The recommendation seeks to protect States' interest by curbing the centre's misuse of powers.
- It specified that the Centre should rather than bring the whole state under emergency, bring only the troubled area under its jurisdiction. The time period of an emergency should be more than three months.

3. **In the context of Communal Violence Bill**

- As per the Commission's recommendation, **there should be an amendment in the Communal Violence Bill**, as per which the Centre will have the right to deploy its forces in the State without the consent of the State for a limited period of time.
- Such deployment of forces can last only for a week and after that week 'post-facto' consent should be taken from the state.

4. **In the context of Concurrent List**

- The Commission recommended that the **States should be consulted** through the inter-state council before bills are introduced on matters that fall in the concurrent list.

5. **In the context of National Integration Council**

- It recommended the **creation of a superseding structure for matters relating to internal security**. This structure could be known as the National Integration Council'.
- Further it recommended that this council should have at least one annual meeting and that a five member delegation of the Council must, within a period of two days, visit any communally affected area.

6. **In the context of President Pocket Veto Power**

A provision should be made according to which the President's decision to exercise

his Pocket Veto Power is communicated within a period of six months to the respective State.

7. **In the context of Union's Treaty making Power**

According to the commission's recommendations, the **union's treaty-making power should be limited to treaties involving topics on the State list**. States will have more representation in their internal affairs this way. The Commission determined that nations should be more involved in treaties that are drafted in response to their concerns. This will ensure that the many levels of government can coexist peacefully.

8. **On Choosing A Chief Minister**

- Punchhi Commission also gave certain guidelines for the Governor in choosing a Chief Minister:
- **In choosing a Chief Minister, the Governor should be guided by the following principles, viz.**
- The party or combination of parties that command the widest support in the Legislative Assembly should be called upon to form the Government.
- **If there is a single party having an absolute majority in the assembly, the leader of the party should automatically be asked to become the Chief Minister.**
- If there is no such party, the Governor should select a Chief Minister from among the following party or group of Parties by sounding them, in turn, in the order of preference indicated below.
- An alliance of parties that was formed prior to the elections.
- The largest single party staking a claim to form the government with the support of others including "independence".
- A post-electoral coalition of parties, with all the partners in the coalition joining governments.
- A post-electoral alliance of parties with some of the parties in the alliance from a government and a remaining party, including "independents", supporting the government from outside.

		<p>The M.M. Punchhi Commission has produced an insightful report with excellent proposals for seamless coordination and cooperation between the union government and state governments. Some of the proposals, such as having the governor come from outside the state, have been implemented. These recommendations should be implemented with a proper framework to extract the most benefit we can out of them.</p>
<p>12.</p>	<p>b</p>	<p>New moai statue uncovered on Easter Island</p> <ul style="list-style-type: none"> ● They are massive megalithic stone-carved human-shaped statues found at Easter Island. ● They are famous for their carved heads and "Pukao," a hat-like covering made from a soft red stone. ● They were built in approximately 1400 - 1650 A.D. by the natives of this island known as Rapa Nui. ● There are around 1000 Moai statues which are made up of volcanic tuff, the tallest of them being 33 feet. ● On average, they weigh between 3 to 5 tons, but the heaviest ones can weigh up to 80. ● The tools used for carving the moai statues are called toki, and are simple handheld chisels. ● What do moais represent? <ul style="list-style-type: none"> ○ They were built to honor chieftains or other important people who had passed away. ○ They were placed on rectangular stone platforms called ahu, which are tombs for the people that the statues represented. ○ The moais were intentionally made with different characteristics since they were intended to keep the appearance of the person they represented. <p>Easter Island:</p> <ul style="list-style-type: none"> ● Easter Island, also called Rapa Nui, is a remote Chilean territory located

		<p>in the Pacific Ocean, roughly 2,200 miles from mainland Chile.</p> <ul style="list-style-type: none"> • It is one of the most remote inhabited places in the world. • Much of the island, which is home to some 8,000 residents, is protected as a national park and a UNESCO World Heritage site.
<p>13.</p>	<p>c</p>	<p>Press Council issues advisory on 'paid news'</p> <ul style="list-style-type: none"> • The PCI was first set up in 1966 by the parliament on the recommendations of the First Press Commission under the chairmanship of Justice J.R Mudholkar. • The present council functions under the Press Council Act 1978. • It is a statutory, quasi-judicial body that acts as a watchdog of the press in India. • Composition: <ul style="list-style-type: none"> ○ It consists of a Chairman and 28 other members. ○ The Chairman is nominated by a committee consisting of Chairman of Rajya Sabha, the Speaker of Lok Sabha, and one representative of the council ○ The Chairman, by convention, has been a retired judge of the Supreme Court. ○ The term of the Chairman and the members of the Council is 3 years. • Primary Function: To check the media practice and to keep an eye on the freedom of the press. • Other Functions: <ul style="list-style-type: none"> ○ Helping newspapers to maintain their independence; ○ Building up a code of conduct for journalists and newspapers according to high professional standards; ○ Reviewing any development which is likely to restrict the supply and dissemination of news of public interest and importance;

		<ul style="list-style-type: none"> ○ Reviewing such cases where assistance has been received by any newspaper or news agency in India from foreign sources, as referred to it by the Central Government; ○ Providing facilities for the proper education and training of persons in the profession of journalism; ○ Studying developments that may lead towards monopoly or concentration of ownership of newspapers and suggest remedies; ● Powers: <ul style="list-style-type: none"> ○ It adjudicates the complaints either against the Press for violation of journalistic ethics or by the Press for interference with its freedom. ○ The council shall have the same powers throughout India as are vested in a Civil court while trying a suit under the Code of Civil Procedure, 1908. ○ Every inquiry held by the council shall be deemed to be a judicial proceeding under sections 193 and 228 of the Indian Penal Code. ○ The decision of the council is final and can not be challenged in any court of law.
14.	b	<p>Zero-calorie sweetener linked to heart attack and stroke, study finds</p> <ul style="list-style-type: none"> ● The researchers have pointed out the following issues in the report <ul style="list-style-type: none"> ○ Long-term use of this particular artificial sweetener is associated with an increased risk of heart attack and stroke. ○ Erythritol made platelets easier to activate and form a clot. ○ After ingestion, erythritol is poorly metabolised by the body. Instead, it goes into the bloodstream and leaves the body mainly through urine. ○ The human body creates low amounts of erythritol naturally, so

		<p>any additional consumption can accumulate.</p> <p>Erythritol</p> <ul style="list-style-type: none">• Erythritol is a popular artificial sweetener that is widely available throughout the world.• It is an organic compound - a naturally occurring, four-carbon sugar alcohol (or polyol).• It is used as a food additive and sugar substitute.• Erythritol is 60–70% as sweet as sucrose (table sugar).• However, it is almost completely noncaloric and does not affect blood sugar or cause tooth decay.• Synthesis: It is synthesized from corn using enzymes and fermentation.
15.	b	<ul style="list-style-type: none">• The symbiotic interaction in which both partners benefit is referred to as mutualism. It is the relationship exhibited by the clownfish and sea anemone for instance.• The clownfish and a sea anemone pair up, both species require each other to fight for their survival. The clownfish need protection from predators, so it requires sea anemone for protection. Sea anemone, on the other hand, requires food that is given by clownfish (faeces) to live. The two species derive benefits from each other. Their partnership is thus called a mutualistic relationship. The symbiotic relationship is known as commensalism, in which one species profits, while the other species are not affected. In simple words, one partner profits and no harm is done to the other.• The symbiotic relationship in which one species (the parasite) benefits, while the other species (the host) is injured is known as parasitism. One partner benefits and causes damage to others. Mosquitoes, mistletoe, roundworms, all the viruses, ticks, and protozoa that cause malaria are

		<p>examples of parasitism. Amensalism is any relationship between organisms of different species in which one of the organisms remains unchanged, while the other organism is inhibited or destroyed.</p>
<p>16.</p>	<p>b</p>	<p>A five-judge bench of the Supreme Court (SC) unanimously ruled that the appointment of the Chief Election Commissioner and the Election Commissioners shall be made by the President on the advice of a Committee consisting of the Prime Minister, the Leader of the Opposition of the Lok Sabha and Chief Justice of India (CJI).</p> <p>§ In case no leader of Opposition is available, the leader of the largest opposition Party in the Lok Sabha in terms of numerical strength will be a part of such a committee.</p> <p><u>Important Points of the Verdict</u></p> <p>§ SC Verdict:</p> <ul style="list-style-type: none"> o SC stated that a reading of the debates of the Constituent Assembly (CA) on the appointment of ECI makes clear that all the members were of the clear view that elections must be conducted by an independent Commission. o The deliberate addition of the words “subject to the provisions of any law made in that behalf by Parliament” further indicates that CA envisaged parliament making norms to govern appointment to ECI. o While ordinarily, the court cannot encroach on a purely legislative power, but in the context of the Constitution and inertia of the Legislature and the vacuum created by it make it necessary for the court to intervene. o On the question whether process of removal should be same for CEC and the ECs, SC stated that it cannot be same as CEC has special position and article 324

becomes inoperable without CEC.

- o SC left the question of **funding the EC, Permanent secretariat and need for expenditure to be charged on Consolidated Fund of India for the government to decide.**

§ **Government Argument:**

- o The government had argued that **in the absence of such a law by parliament, the President has the constitutional power** and asked the SC to exhibit Judicial restraint.

Challenge

§ As the constitution places the power to make any law on appointment of ECI in the hands of Parliament, SC ruling on this issue poses a **question of Separation of Power.**

- o However, SC has stated that this ruling will be **subject to any law made by parliament**, which means parliament can bring a law to undo it.

§ Another view is that since there is no law made by parliament on this issue, **the Court must step in to fill the "constitutional vacuum."**

Existing Provisions for Appointment to ECI

§ **Constitutional Provisions:**

- o **Part XV (Article 324-329)** of the Indian Constitution: It deals with elections and establishes a commission for these matters.

§ **Structure of ECI:**

- o Originally the **commission had only one EC** but after the Election Commissioner Amendment Act 1989, it was made a **multi-member body (1 CEC & 2 other ECs).**
- o According to Article 324, the **Election Commission shall consist of the CEC** and such number of other election

commissioners, if any, as the President may from time-to-time fix.

§ Appointment Procedure:

- o **Article 324(2): The appointment** of the CEC and other Election Commissioners shall be **made by the President, subject to the provisions of any law made in that behalf by Parliament.**

- The Law Minister suggests a pool of suitable candidates to the Prime Minister for consideration. The President makes the **appointment on the advice of the PM.**

- o The President determines the conditions of service and tenure of office of the Election.

- They have a **tenure of six years, or up to the age of 65 years**, whichever is earlier.

§ Removal:

- o They can **resign anytime or can also be removed** before the expiry of their term.
- o The CEC can be removed from office only through a **process of removal similar to that of a SC judge** by Parliament.
- o Any other EC cannot be removed except on the recommendation of CEC.

<https://www.hindustantimes.com/india-news/very-positive-and-progressive-adr-hails-sc-verdict-on-eci-appointments-101677833974146.html>

17.

a

Land mafias damage rampart of ancient fortified city of Sisupalgarh

- It is **located** near the city of Bhubaneswar **in Odisha.**
- It was **once the capital of Kalinga**, which is the ancient name of Odisha.
- It is considered **one of the largest** and best-preserved **ancient**

		<p>fortifications in India.</p> <ul style="list-style-type: none"> ● The fortifications are over 2,000 years old and date back to the 3rd or 4th century BC. ● The remains of the fortification were discovered in 1948 by the Indian archaeologist B.B. Lal. ● Features: <ul style="list-style-type: none"> ○ It was designed and constructed in a complete square shape that was surrounded by defensive walls. ○ Each side spreads for over half a mile, and the interior is full of stone ruins and sculptures. ○ The walls of the fortification are a little over nine meters (30 feet) tall. ○ There were eight gateways into the city, two in each of the four sides of the wall. ○ The gateways were connected by streets in a grid-like arrangement with the palace in the center. ○ The gates were elaborate structures made of brick and stone. ○ There is evidence of stone-lined reservoirs that were likely used for harvesting rainwater. ○ Intelligent traffic management, pedestrian-friendly pathways, grand gateways with guard houses, wide roads, and a vast open space were some of the key features of this ancient city. ○ The city is believed to have a population of around 20,000 to 25,000.
18.	B	<ul style="list-style-type: none"> ● Helium is a noble gas and has a closed-shell electronic configuration, making it stable and unreactive. It has the lowest boiling and melting points of any element and exists only as a gas, except under extreme conditions. ● Discovery of Helium:

- Helium was **first discovered in 1868 by French astronomer Jules Janssen and English astronomer Joseph Norman Lockyer**, who observed a yellow spectral line in the light emitted by the sun during a solar eclipse.
 - Helium gets its name from the **Greek word "helios," which means sun.**
- **Sources and Extraction of Helium:**
 - Helium is the **second most abundant element in the universe**, after hydrogen. However, **it is relatively rare on Earth, with most of it being produced by the decay of radioactive elements** in the Earth's crust.
 - Natural gas is the primary source of helium on Earth.
 - Helium is extracted from natural gas using a process called **cryogenic distillation.**
- **Reserves and Production:**
 - As of 2022, the reserves of helium in the **United States has the largest reserves of helium** globally followed by Algeria and Russia.
 - **India's Rajmahal volcanic basin in Jharkhand** is the **storehouse of helium** trapped for billions of years.
- **Uses of Helium:**
 - **Balloons and airships** (because it is lighter than air and does not react chemically with other elements).
 - **Industrial applications**, including **welding, cooling, and as a protective gas** in the production of semiconductors and fiber optic cables.
 - In **medical applications**, such as **magnetic resonance imaging (MRI)**, as a cooling agent for superconducting magnets.
 - It is also used in **nuclear magnetic resonance (NMR)** spectroscopy and as a carrier gas in gas chromatography.
- **Shortage of Helium:**
 - There is currently a shortage of helium in the world, with **demand outstripping supply.**

		<ul style="list-style-type: none"> ○ The shortage is due to a variety of factors, including the shutdown of some helium plants, the increasing demand for helium in emerging economies, and the lack of new helium sources. <ul style="list-style-type: none"> ■ The shortage of helium has led to concerns about its use in balloons and airships, as well as its use in medical and industrial applications. ● https://www.downtoearth.org.in/news/science-technology/there-s-a-new-way-to-reach-untapped-helium-reserves-that-may-solve-supply-shortage-88017
19.	C	<p>Dengue</p> <ul style="list-style-type: none"> ● Dengue is a mosquito-borne viral infection, found in tropical and sub-tropical climates worldwide, mostly in urban and semi-urban areas. ● The virus responsible for causing dengue, is called dengue virus (DENV). ● There are four DENV serotypes, meaning that it is possible to be infected four times. <p>Transmission and Symptoms</p> <ul style="list-style-type: none"> ● Dengue is transmitted by several species of mosquitoes within the genus Aedes. ● Symptoms include fever, headache, muscle, and joint pain, and a characteristic skin rash that is similar to measles. ● There are four types of dengue strains, and type II and IV are considered to be more severe and normally require hospitalisation. ● The aedes mosquito breeds in clean stagnant water. <p>Treatment</p> <ul style="list-style-type: none"> ● There is no specific medicine to treat dengue.

Platelets

- Platelets are pieces of very large cells in the bone marrow called megakaryocytes.
- They help form blood clots to slow or stop bleeding and to help wounds heal.
- Having too many or too few platelets or having platelets that don't work as they should can cause problems.

Normal platelet count in a body

- In the normal human body, the platelet count in dengue ranges from 1.5 lakh to 4 lakh.

Blood cell or substance	Levels found in a healthy person
Haemoglobin (Hb) level (for red blood cells)	130-180 g/l (men) 115-165 g/l (women)
Platelets	150-400 x 10 ⁹ /l
White blood cells (WBC)	4.0-11.0 x 10 ⁹ /l
Neutrophils	2.0-7.5 x 10 ⁹ /l
Lymphocytes	1.5-4.5 x 10 ⁹ /l

Reasons behind drop in platelet count in Dengue

- Platelet count in dengue decreases as it suppresses bone marrow, which is the platelet-producing area.
- Platelet count in dengue decreases because of blood cells affected by the disease.
- Antibodies that are produced during this period lead to massive destruction of platelets in dengue.

Impact of drop in platelet count in cases of dengue

- Patient can be asymptomatic or may have bleeding manifestations, such as:
- Bleeding from gums or nose
- Blood in urine, stools or vomit
- Bleeding under the skin, which might look like bruising
- Major internal organ bleeds in few cases

India's first prospective DNA vaccine against disease is promising

Researchers at **India's National Centre for Biological Sciences**, in collaboration with nine other institutions in India, Africa, and the US, have developed **India's first and only DNA vaccine candidate for dengue fever.**

§ In preliminary trials on mice, the **candidate generated a robust immune response** and improved survival rates after exposure to the disease.

DNA Vaccine

§ A **DNA vaccine is a type of vaccine that uses a small piece of DNA** that codes for a specific antigen (**a molecule that triggers an immune response**) from a pathogen, such as a virus or bacterium, to stimulate an immune response.

§ The **DNA is injected directly into the body's cells**, where it instructs the cells to produce the antigen.

- The **immune system then recognizes the antigen as foreign** and **mounts an immune response against it**, which helps to develop immunity to the pathogen.

§ DNA vaccines are **third-generation vaccines.**

§ The **ZyCoV-D** is the **world's first and India's indigenously developed DNA based vaccine for COVID-19.**

Challenges in Vaccine Development:

- Developing an **effective vaccine against dengue is tricky** because it is caused by four closely related virus serotypes.
 - **Each one interacts differently with antibodies in**

		<p>human blood. A person infected with DEN-1 is then protected against it for life, but not against the other three serotypes.</p> <ul style="list-style-type: none"> ■ An ideal vaccine must target all serotypes. ○ Also, vaccines trigger production of antibodies that prevent the virus from binding to cells at later exposure. But with dengue, antibodies help the virus replicate and cause severe disease. <p>https://www.downtoearth.org.in/news/health/decoding-dengue-india-s-first-prospective-dna-vaccine-against-disease-is-promising-but-challenges-lie-ahead-87951</p>
20.	c	<p>There are four cultivated species of cotton viz. <i>Gossypium arboreum</i>, <i>G. herbaceum</i>, <i>G. hirsutum</i> and <i>G. barbadense</i>. The first two species are diploid ($2n=26$) and are native to old world. They are also known as Asiatic cottons because they are grown in Asia. The last two species are tetraploid ($2n=52$) and are also referred to as New World Cottons. <i>G. hirsutum</i> is also known as American cotton or upland cotton and <i>G. barbadense</i> as Egyptian cotton or Sea Island cotton or Peruvian Cotton or Tanguish Cotton or quality cotton. <i>G. hirsutum</i> is the predominant species which alone contributes about 90% to the global production. Perhaps, India is the only country in the world where all the four cultivated species are grown on commercial scale.</p> <p>Cotton, a semi-xerophyte, is grown in tropical & sub tropical conditions. A minimum temperature of 15°C is required for better germination at field conditions. The optimum temperature for vegetative growth is 21-27°C & it can tolerate temperature to the extent of 43°C but temperature below 21°C is detrimental to the crop. Warm days of cool nights with large diurnal variations during the period of fruiting are conducive to good boll & fibre development. Cotton is grown on a variety of soils ranging from well drained deep alluvial soils in the north to black clayey soils of varying depth in central region and in black and mixed black and red soils in south zone. Cotton is semi-tolerant to salinity</p>

		<p>and sensitive to water logging and thus prefers well drained soils</p> <p>https://www.nfsm.gov.in/BriefNote/BN_Cotton.pdf</p>
21.	d	<p>Black hole</p> <ul style="list-style-type: none"> • A black hole is a region in space where gravity pulls so much that even light can not get out. • The gravity is so strong because matter has been squeezed into a tiny space. This can happen when a star is dying. • Because no light can get out, it is difficult to detect a black hole. • The largest black holes are called "supermassive." These black holes have masses that are more than 1 million suns together. • Albert Einstein first predicted the existence of black holes in 1916, with his general theory of relativity.
22.	b	
23.	a	<p>'Event horizon' of a Black hole</p> <ul style="list-style-type: none"> • It is the boundary defining the region of space around a black hole from which nothing (not even light) can escape. • The escape velocity for an object within the event horizon exceeds the speed of light. • The radius of the event horizon is called the Schwarzschild radius, after the German astronomer Karl Schwarzschild.

24.	d	<p>Recently a group of zoologists rediscovered <i>Uperodon montanus</i>, a frog, which is endemic to the higher altitudes of the Western Ghats.</p> <p>About <i>Uperodon montanus</i>:</p> <ul style="list-style-type: none"> ● It is also known as Jerdon's narrow-mouthed frog or Malabar Hill frog ● It is endemic to the Western Ghats of India. ● The typical habitat in which this frog is found in tree holes in the rainy season is in the moist deciduous forest to evergreen forest. ● This frog is considered a montane species and is restricted to higher altitude ranges of 800-1,700 metres. ● They are distributed from near Wayanad south across the Palghat and the Shencottah gaps to the Agasthyamalai hills. ● Its tadpoles are free-swimming and exotopic, which means they feed on other species. ● Conservation status: <ul style="list-style-type: none"> ○ IUCN: Near Threatened
25.	c	<ul style="list-style-type: none"> ● The Parliament has exclusive powers to make laws with respect to any of the matters enumerated in the Union List. This list has at present 100 subjects (originally 97 subjects) like defence, banking, foreign affairs, currency, atomic energy, insurance, communication, interstate trade and commerce, census, audit and so on. ● The state legislature has “in normal circumstances” exclusive powers to make laws with respect to any of the matters enumerated in the State List. This has at present 61 subjects (originally 66 subjects) like public order, police, public health and sanitation, agriculture prisons, local government, fisheries, markets, theaters, gambling and so on. ● Both, the Parliament and state legislature can make laws with respect

to any of the matters enumerated in the Concurrent List. This list has at present 52 subjects like criminal law and procedure, civil procedure, marriage and divorce, population control and family planning, electricity, labour welfare, economic and social planning, drugs, newspapers, books and printing press, and others.

- The **42nd Amendment Act of 1976** transferred five subjects to Concurrent List from State List, that is, **(a) education, (b) forests, (c) weights and measures, (d) protection of wild animals and birds, and (e) administration of justice;** constitution and organisation of all courts except the Supreme Court and the high courts.
- Parliament has power to make laws with respect to any matter for any part of the territory of India not included in a state even though that matter is one which is enumerated in the State List. This provision has reference to the Union Territories or the Acquired Territories (if any).
- The **101st Amendment Act of 2018 has made a special provision with respect to goods and services tax.** The Parliament and the state legislature have power to make laws with respect to goods and services tax imposed by the Union or by the State. Further, the parliament has exclusive power to make laws with respect to goods and services tax where the supply of goods or services or both takes place in the course of inter-state trade or commerce.
- The power to make laws with respect to **residuary**, subjects (i.e. the matters which are not enumerated in any of the three lists) **is vested in the Parliament.** This residuary power of legislation includes the power to levy residuary taxes.
- From the above scheme, it is clear that the matters of national importance and the matters which require uniformity of legislation nationwide are included in the Union List. The matters of regional and local importance and the matters which permit diversity of interest are specified in the State List. The matters on which uniformity of legislation throughout the country is desirable but not essential are enumerated in the concurrent list. Thus, it permits diversity along with uniformity.

- **In US, the powers of the Federal Government are enumerated in the Constitution and the residuary powers are left to the states.** The Australian Constitution followed the American pattern of single enumeration of powers. **In Canada, on the other hand, there is a double enumeration— Federal and Provincial,** and the residuary powers are vested in the Centre. The Government of India Act of 1935 provided for a three-fold enumeration. viz.. federal provincial and concurrent.
- The present Constitution follows the scheme of this act but with one difference that is under this act **the residuary powers were given neither to the federal legislature nor to the provincial legislature but to the governor-general of India.** In this respect. India follows the Canadian precedent
- The **Constitution expressly secures the predominance of the Union List over the State List and the Concurrent List and that of the Concurrent List over the State List.**
- Thus, in case of overlapping between the Union List and the State List, the former should prevail. In case of overlapping between the Union List and the Concurrent List it is again the former which should prevail. Where there is a conflict between the Concurrent List and the State List it is the former that should prevail.
- In case of a conflict between the Central law and the state law on a subject enumerated in the Concurrent List the Central law prevails over the state law. But, there is an exception. **If the state law has been reserved for the consideration of the president and has received his assent, then the state law prevails in that state.** But, it would still be competent for the Parliament to override such a law by subsequently making a law on the same matter
- The **1983 Sarkaria Commission essentially blessed the status quo:** “After a careful analysis and examination of the entries in the concurrent list, we have come to the conclusion that a good enough case does not exist for amending the Constitution to transfer any entry in the concurrent list to the state list.” But it did concede that before legislating on items in the

		<p>concurrent list, the Union government should consult the states.</p> <ul style="list-style-type: none"> • Roughly 20 years down the line from 1983, nothing changed. In 2002, the National Commission to Review the Working of the Constitution (Venkatachaliah Commission) submitted its report, and said: “There is, however, no formal institutional structure that requires mandatory consultation between the Union and the states in the area of legislation under the concurrent list.”
26.	a	<p>6.9 magnitude earthquake strikes Kermadec Islands in New Zealand</p> <ul style="list-style-type: none"> • They are volcanic island group in the South Pacific Ocean, 600 mi (1,000 km**) northeast of Auckland, New Zealand.** • They are a dependency of New Zealand. • The islands are a volcanic island arc, formed at the convergent boundary where the Pacific Plate subducts under the Indo-Australian Plate. • They are the tiny emergent part of a chain of submarine volcanoes that define the Kermadec ridge. • They are uninhabited, except for Raoul Island where a team of Department of Conservation staff carry out weed control work and make meteorological observations. • The climate of the islands is subtropical. • The islands are seismically active.
27.	b	<p>With overfishing, great seahorses bolt from the Coromandel</p> <ul style="list-style-type: none"> • Great seahorses can be found in relatively deep waters. • These are ovoviviparous and the males give birth to live young. • They also have some traits, such as small body size, fast growth and

		<p>high fecundity, that may confer resilience to high levels of exploitation</p> <ul style="list-style-type: none"> ● There are 46 known species of seahorses worldwide. India's coastal ecosystems are home to nine of the twelve species found in the Indo-Pacific, which is a hotspot for seahorse populations. ● They are distributed across diverse ecosystems such as seagrass, mangroves, macroalgal beds, and coral reefs. ● These nine species are distributed along the coasts of eight States and five Union Territories from Gujarat to Odisha, apart from Lakshadweep and the Andaman and Nicobar Islands. ● They are poor swimmers but migrate to new habitats by rafting (clinging to floating substrata such as macroalgae or plastic debris for dispersal by ocean currents) to ensure the survival of their population. ● Conservation status <ul style="list-style-type: none"> ○ IUCN: Vulnerable ○ CITES: Appendix II
28.	d	<p>G20 delegates enjoy day out with birdwatching, pottery at Sultanpur National Park</p> <ul style="list-style-type: none"> ● Sultanpur National Park, formerly known as Sultanpur Bird Sanctuary, is located in the Gurgaon district in Haryana. ● It is spread over 1.42 sq km, comprising mainly wetlands. ● This national park is a major habitat for aquatic birds, including migratory and resident birds. ● It was notified as a Ramsar site, a wetland of international importance, in 2021. ● Vegetation: Tropical and dry deciduous. ● Flora: Grasses, dhok, khair, tendu, ber, jamun, banyan tree, neem, berberis, Acacia nilotica and Acacia tortilis. ● Fauna:

		<ul style="list-style-type: none"> ○ More than 320 species of birds have been recorded from the Park. ○ This is a very important wintering ground for waterfowl. ○ Some of the resident and migratory species of birds found in the area are the Common hoopoe, Purple sunbird, Black francolin, Little cormorant, Indian Cormorant, Siberian Crane, Greater Flamingo, Common Teal, Common Greenshank, Ruff, etc. ○ Other Key Fauna: There is no large wild mammal of conservation concern in this Park. Nilgai antelope (<i>Boselaphus tragocamelus</i>) is the major wild ungulate in this park.
<p>29.</p>	<p>a</p>	<p>You may need ETIAS for your next trip to Europe</p> <ul style="list-style-type: none"> ● It is a proposed digital travel authorization system for visa-exempt visitors to the EU and its Schengen Area. ● ETIAS is not a visa and is more accurately referred to as a visa waiver. ● It is a completely electronic system that allows and keeps track of visitors from countries who do not need a visa to enter the Schengen Zone. ● It will gather, keep track of, and update necessary information regarding visitors to determine whether it is safe for them to enter Schengen countries. ● The ETIAS will undergo a detailed security check of each applicant to determine whether they can be allowed to enter any Schengen Zone country. ● The ETIAS, besides being used for business and tourist purposes, will also allow people to visit the Schengen countries for medical and transit reasons. ● It will be mandatory for all countries that are Schengen visa-free. <p>Schengen Area</p> <ul style="list-style-type: none"> ● The Schengen Area, or Schengen Countries Zone, is a group of 27

		<p>European nations that have abolished border controls between each other.</p> <ul style="list-style-type: none"> ● Most European Union (EU) countries are signatories to the Schengen Agreement, although some non-Schengen countries, like Bulgaria and Romania, are signed up but not yet active members. ● Switzerland, Iceland, and Norway are not in the EU but are inside of the Schengen Area.
<p>30.</p>	<p>a</p>	<p>Researchers in India identify better drug treatment for Severe Scrub Typhus</p> <ul style="list-style-type: none"> ● Scrub typhus is a life-threatening infection caused by Orientia tsutsugamushi bacteria which is a major public health threat in South and Southeast Asia. ● It is spread to people through bites of infected chiggers (larval mites). ● Symptoms: The most common symptoms of scrub typhus include fever, headache, body aches, and sometimes rash. ● Treatment: Scrub typhus should be treated with the antibiotic doxycycline. Doxycycline can be used in persons of any age. ● There is no vaccine available for this disease. <p>Typhus fever</p> <ul style="list-style-type: none"> ● Typhus fevers are a group of diseases caused by bacteria that include epidemic typhus, scrub typhus, and murine typhus. <ul style="list-style-type: none"> ○ Epidemic typhus is caused due to Rickettsia prowazeki and spread by body lice. ○ Scrub typhus is caused due to Orientia tsutsugamushi and spread by chiggers. ○ Murine typhus is caused due to Rickettsia typhi spread by fleas.

31.	b	<p>High Seas</p> <ul style="list-style-type: none"> • The high seas begin at the border of countries' exclusive economic zones, which extend up to 370km (200 nautical miles) from coastlines. • Beyond that point, the seas are under the jurisdiction of no country, and all countries have a right to fish, ship, and do research. • They make up more than 60% of the world's oceans by surface area. • Activities on the high seas are often unregulated and insufficiently monitored, leaving them vulnerable to exploitation.
32.	a	<p>ISRO to undertake controlled re-entry experiment of decommissioned satellite on March 7, 2023</p> <ul style="list-style-type: none"> • Megha-Tropiques is an Indo-French Joint Satellite Mission for studying the water cycle and energy exchanges in the tropics. • Objective: To understand the life cycle of convective systems that influence tropical weather and climate and their role in the associated energy and moisture budget of the atmosphere in tropical regions. • It provides scientific data on the contribution of the water cycle to the tropical atmosphere, with information on condensed water in clouds, water vapour in the atmosphere, precipitation, and evaporation. • With its circular orbit inclined 20 deg to the equator, the Megha-Tropiques is a unique satellite for climate research that should also aid scientists seeking to refine prediction models. • The Megha-Tropiques has day, night and all-weather viewing capabilities; it passes over India almost a dozen times every day, giving scientists an almost real-time assessment of the evolution of clouds. <p>Megha-Tropiques carries the following four payloads:</p>

		<ul style="list-style-type: none"> ● Microwave Analysis and Detection of Rain and Atmospheric Structures (MADRAS), an Imaging Radiometer developed jointly by CNES and ISRO ● Sounder for Probing Vertical Profiles of Humidity (SAPHIR), from CNES. ● Scanner for Radiation Budget (ScaRaB), from CNES. ● Radio Occultation Sensor for Vertical Profiling of Temperature and Humidity (ROSA), procured from Italy.
33.	d	<ul style="list-style-type: none"> ● Phytoplanktons: They are tiny microscopic floating plants found in water bodies. <ul style="list-style-type: none"> ○ Study of phytoplankton biomass is done by analyzing chlorophyll-a, a dominant pigment found in phytoplankton cells. ○ Significance of Phytoplanktons: <ul style="list-style-type: none"> ■ They contribute more than half of the oxygen in the environment. ■ They reduce global warming by absorbing human-induced carbon dioxide. ■ They also serve as the base of the ocean food chain. ■ They are important bioindicators regulating life in oceans. Their abundance determines the overall health of the ocean ecosystem. ● Study: The scientists closely tracked the long-term trends of chlorophyll-a in the northwestern Bay of Bengal. <ul style="list-style-type: none"> ○ It was based on in-situ and satellite data spanning over the last 16 years, from January 2003 to December 2018. ○ National Aeronautics and Space Administration (NASA)'s MODIS (Moderate Resolution Imaging Spectroradiometer), NASA's VIIRS (Visible Infrared Imaging Radiometer Suite) sensor and Indian Space Research Organisation (ISRO)'s OCM-2 (Ocean Colour Monitor-2) were used for satellite data. ● Findings: There were two peaks of chlorophyll-a — the primary peak

occurred during the **pre-southwest monsoon** due to the recurrent phytoplankton bloom in the coastal water and the secondary peak occurred during the **end of the southwest monsoon**, spreading to far offshore areas.

- **Reasons:** Along with **increase in phytoplanktons**, other reasons for peak in chlorophyll-a may be **physical forces** such as upwelling, wind-induced vertical mixing, convective overturn and **chemicals** from various sources including river runoff.
- **Conclusions:**
 - **Increased Nutrients and More Phytoplanktons:** It reveals that the study area experienced **maximum spatial variability during pre-southwest monsoon with salinity, and nutrients**, the major controlling factors for the abundance and distribution of phytoplankton.
 - **Chances of Eutrophication:** Increase in nutrients could tell an overall improved health status of the ecosystems as a whole; at the same time excessive phytoplanktons could be detrimental to ocean health because of eutrophication.
 - **Eutrophication:** When a water body becomes overly enriched with minerals and nutrients which induce excessive growth of algae or **algal bloom**.
 - This process also results in oxygen depletion of the water body affecting other aquatic animals.

34.	a	<p>People who live in colder climates have seen the trucks put salt on the roads when snow or ice is forecast. The example given is an example of a colligative property. Colligative properties are properties that differ based on the concentration of solute in a solvent, but not on the type of solute. What this means for the example above is that people in colder climates don't necessarily need salt to get the same effect on the roads - any solute will work. However, the higher the concentration of solute, the more these properties will change.</p>
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Boiling Point Elevation

Water boils at 100°C at 1atm of pressure, but a solution of salt water does not. When table salt is added to water the resulting solution has a higher boiling point than the water did by itself. The ions form an attraction with the solvent particles that then prevent the water molecules from going into the gas phase. Therefore, the salt-water solution will not boil at 100°C . In order to cause the salt-water solution to boil, the temperature must be raised about 100°C . This is true for any solute added to a solvent; the boiling point will be higher than the boiling point of the pure solvent (without the solute). In other words, when anything is dissolved in water the solution will boil at a higher temperature than pure water would.

The boiling point elevation due to the presence of a solute is also a colligative property. That is, the amount of change in the boiling point is related to the number of particles of solute in a solution and is not related to chemical composition of the solute. A 0.20m solution of table salt and a 0.20m solution of hydrochloric acid would have the same effect on the boiling point.

Freezing Point Depression

The effect of adding a solute to a solvent has the opposite effect on the freezing point of a solution as it does on the boiling point. A solution will have a lower freezing point than a pure solvent. The **freezing point** is the temperature at which the liquid changes to a solid. At a given temperature, if a substance is added to a solvent (such as water), the solute-solvent interactions prevent the solvent from going into the solid phase. The solute-solvent interactions require the temperature to decrease further in order to solidify the solution. A common example is found when salt is used on icy roadways. Here the salt is put on the roads so that the water on the roads will not freeze at the normal 0°C but at a lower temperature, as low as -9°C . The de-icing of planes is another common example of freezing point depression in action. A number of solutions are used but commonly a solution such as ethylene glycol, or a less toxic monopropylene glycol, is used to de-ice an aircraft. The aircrafts are sprayed with the solution when the temperature is predicted to drop

below the freezing point. The **freezing point depression** is the difference in the freezing points of the solution from the pure solvent. This is true for any solute added to a solvent; the freezing point of the solution will be lower than the freezing point of the pure solvent (without the solute).

Note

When anything is dissolved in water, the solution will freeze at a lower temperature than pure water would.

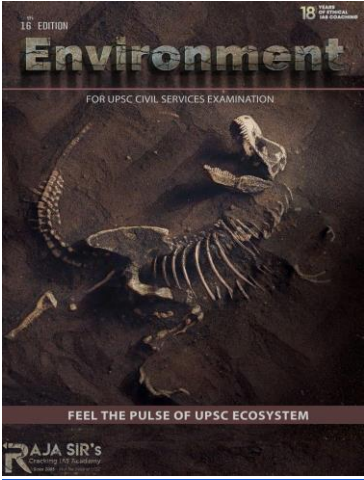
The freezing point depression due to the presence of a solute is also a colligative property. That is, the amount of change in the freezing point is related to the number of particles of solute in a solution and is not related to the chemical composition of the solute. A 0.20m solution of table salt and a 0.20m solution of hydrochloric acid would have the same effect on the freezing point.

35.

c

Physical Change	Chemical Change
When a substance undergoes a physical change, its composition remains the same despite its molecules being rearranged.	When a substance undergoes a chemical change, its molecular composition is changed entirely. Thus, chemical changes involve the formation of new substances.
Physical change is a temporary change.	A chemical change is a permanent change.

	<p>A Physical change affects only physical properties i.e. shape, size, etc.</p>	<p>Chemical change both physical and chemical properties of the substance including its composition</p>
	<p>A physical change involves very little to no absorption of energy.</p>	<p>During a chemical reaction, absorption and evolution of energy take place.</p>
	<p>Some examples of physical change are freezing of water, melting of wax, boiling of water, etc.</p>	<p>A few examples of chemical change are digestion of food, burning of coal, rusting, etc.</p>
	<p>Generally, physical changes do not involve the production of energy.</p>	<p>Chemical changes usually involve the production of energy (which can be in the form of heat, light, sound, etc.)</p>
	<p>In a physical change, no new substance is formed.</p>	<p>A chemical change is always accompanied by one or more new substance(s).</p>
	<p>Physical change is easily reversible i.e original substance can be recovered.</p>	<p>Chemical changes are irreversible i.e. original substance cannot be recovered.</p>

36.	c	<p>Point Calimere Wildlife Sanctuary:</p> <ul style="list-style-type: none">● Point Calimere Wildlife Sanctuary was established in the year of 1967 and is situated in the state of Tamil Nadu.● It houses the famous bird sanctuary of Vedaranyam and the Talaignayar forests.● It is flanked by the Bay of Bengal in the east, and Palk Strait in the south.● It primarily focuses on the protection and conservation of the black antelopes, an endangered and endemic species that are found in this region.● It is designated as a Ramsar site.● Flora: It has mangroves, tropical evergreen forests, and grassland ecosystems.● Fauna: Wild boar, macaque, black buck, chital, Great flamingo, Painted Stork, Little Stint, Seagull and Brown-headed gull are normally found in the sanctuary. 

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37.

a

Amend ment	Year	Importance
7	1956	Reorganisation of states on linguistic basis and abolition of Class A, B, C and D states and introduction of Union Territories.
9	1960	Adjustments to Indian territory as a result of agreement with Paksitan.
10	1961	Dadra, Nagar and Haveli included in Indian Union as a Union Territory on acquisition from Portugal.
12	1961	Goa, Daman and Diu included in Indian Union as a Union Territory on acquisition from Portugal.

		13	1962	The state of Nagaland formed with special protection under Article 371A on 01 Dec 1963.
		14	1962	Pondicherry incorporated into Indian Union after transfer by France.
		21	1967	Sindhi added as language in the 8th schedule.
		26	1971	Privy purse paid to former rulers of princely states abolished.
		36	1975	Sikkim included as an Indian state.
		42	1976	Fundamental Duties prescribed, India became Socialist Secular Republic.
		44	1978	Right to Property deleted from the list of fundamental rights.

		52	1985	Defection to another party after election made illegal.
		61	1989	Voting age reduced from 21 to 18.
		71	1992	Konkani, Manipuri and Nepali added as languages in the Eighth Schedule.
		73	1993	Introduction of Panchayati Raj, addition of Part IX to the Constitution.
		74	1993	Introduction of Municipalities.
		86	2002	Free and compulsory education to children between 6 and 14 years.
		92	2003	Bodo, Dogri, Santhali and Maithli added to the list of recognised languages.

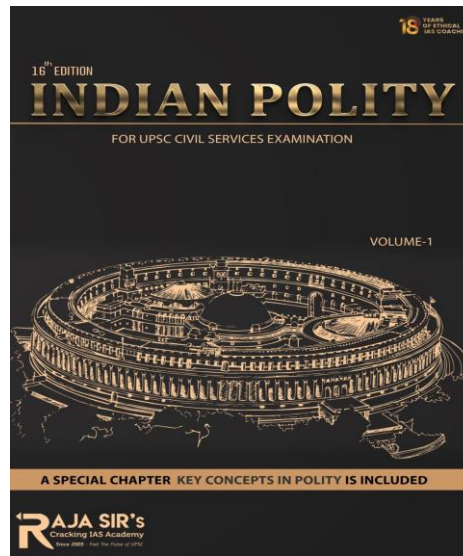
	8,23,45 ,62, 79, 95 and 104	1960, 1970, 1980, 1989, 2000, 2010 and 2020	Extension of reservation of seats for SC/ST and nomination of Anglo- Indian members in Parliament and State Assemblies.
	96	2011	Substituted Odia for Oriya in the Eighth Schedule to the Constitution
	97	2012	Introduction of Part IXB in the Constitution pertaining to Co- operative Societies
	101	2016	Introduction of Goods and Services Tax (GST)
	102	2018	Establishment of National Commission for Backward Classes
	103	2019	Reservation for economically weaker sections of the society

		104	2020	<ul style="list-style-type: none">· This expanded seat quotas in the Lok Sabha for SCs and STs, and state legislatures.· Amended Article 334 to extend the reservations of seats for Scheduled Castes and Scheduled Tribes in Lok Sabha and State assemblies.· However, it did not extend 2 reserved seats in Parliament and 1 for the legislative assembly for Anglo-Indian communities under Article 331.	
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	105	2021	<ul style="list-style-type: none"> · The 105th amendment was introduced based on the Supreme Court ruling in the Maratha reservation case which had by a 3:2 majority. · A list of socially and economically backward classes (SEBCs) should be prepared and maintained by the Central government under the central list. · This amendment seeks to restore the power of states and Union Territories to identify socially and economically backward communities (SEBCs) and maintain a separate list of other backward communities other than the central list. · Inserted Article 366(26C) and 338B with regards to the above.
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The 42nd amendment was the most comprehensive amendment which had 59 clauses and carried out so many changes that it has been described as a "Mini Constitution".

The 52nd amendment was the only amendment to be unanimously adopted by the Parliament.



38.

c

Recent faunal survey conducted in the Parambikulam Tiger Reserve has recorded over 500 species, many of which were hitherto unseen in the protected area.

- Parambikulam is one of the premier Tiger Reserves of India and is endowed by nature in terms of species, habitat and ecosystem diversity.
- It is located in the **Palakkad District of Kerala** and lies in between the Anamalai hills and Nelliampathy hills of the Southern Western Ghats.
- **Flora:** It supports diverse habitat types namely; evergreen forests, moist

		<p>and dry deciduous forests and grasslands.</p> <ul style="list-style-type: none"> ● Fauna: Lion-tailed macaques, Malabar giant squirrel and Flying squirrel, Tarantula (large-bodied spiders) etc. ● There are several endemic, rare, endangered and threatened (RET) species of flora and fauna adding to the diversity of the Reserve. To name a few, <ul style="list-style-type: none"> ○ <i>Coscinium fenestratum</i> and <i>Utreria salicifolia</i> (the IUCN 'red listed' medicinal plants endemic to Anamalais) ○ <i>Tomopterna parambikulamana</i> (an endemic frog of Parambikulam) ○ <i>Garra surendranathanii</i> (an endemic sucker fish) <p><i>Garra</i>: vernacular Gangetic name for a particular species of "sand-digger," which Francis Buchanan-Hamilton applied as a generic name for bottom-dwelling cyprinids "with no affinity to another genus".</p> <p><i>surendranathanii</i>: named for Shri. P. K. Surendranathan Asari "Chief Conservator of Forests, Kerala Forest Department, who has been a constant source of encouragement to Wildlife research activities in the state".</p>
39.	a	<p>Some of the following instruments are used by RBI as a part of their monetary policies.</p> <ul style="list-style-type: none"> ● Open Market Operations: An open market operation is an instrument which involves buying/selling of securities like government bond from or to the public and banks. The RBI sells government securities to control the flow of credit and buys government securities to increase credit flow. ● Cash Reserve Ratio (CRR): Cash Reserve Ratio is a specified amount of bank deposits which banks are required to keep with the RBI in the form of reserves or balances. The higher the CRR with the RBI, the lower will be the liquidity in the system and vice versa. ● Statutory Liquidity Ratio (SLR): All financial institutions have to maintain a certain quantity of liquid assets with themselves at any point in time of

		<p>their total time and demand liabilities. This is known as the Statutory Liquidity Ratio. The assets are kept in non-cash forms such as precious metals, bonds, etc.</p> <ul style="list-style-type: none"> ● Bank Rate Policy: Also known as the discount rate, bank rates are interest charged by the RBI for providing funds and loans to the banking system. An increase in bank rate increases the cost of borrowing by commercial banks which results in the reduction in credit volume to the banks and hence the supply of money declines. An increase in the bank rate is the symbol of the tightening of the RBI monetary policy. ● Credit Ceiling: With this instrument, RBI issues prior information or direction that loans to the commercial bank will be given up to a certain limit. In this case, a commercial bank will be tight in advancing loans to the public. They will allocate loans to limited sectors. A few examples of credit ceiling are agriculture sector advances and priority sector lending.
40.	a	<ul style="list-style-type: none"> ● Marginal Standing Facility: <ul style="list-style-type: none"> ○ The RBI, as a temporary measure, had increased the borrowing limit of scheduled banks under the MSF scheme from 2% to 3% of their deposits with effect from 27 March 2020. ○ MSF is a window for scheduled banks to borrow overnight from the RBI in an emergency situation when interbank liquidity dries up completely. <ul style="list-style-type: none"> ■ Under interbank lending, banks lend funds to one another for a specified term. ○ Banks borrow from the RBI by pledging government securities at a rate higher than the repo rate under Liquidity Adjustment Facility (LAF). <ul style="list-style-type: none"> ■ Repo rate is the rate at which the RBI lends money to commercial banks against the securities in the event of any shortfall of funds. ■ Loans provided at repo rate are provided for a specified period

		<p>with an obligation that the bank will repurchase the securities back at a predetermined rate.</p> <ul style="list-style-type: none"> ○ Differences between Repo Rate and MSF <ul style="list-style-type: none"> ■ Repo rate is the rate at which RBI lends money to commercial banks, while MSF is a rate at which RBI lends money to scheduled banks. ■ The repo rate is given to banks that are looking to meet their short-term financial needs. While, the MSF is meant for lending overnight to banks. ■ Lending at repo rates involves a repurchase agreement of securities. While it is not so in MSF. ■ Under MSF, banks are also allowed to use the securities that come under Statutory Liquidity Ratio (SLR) in the process of availing loans from RBI. <ul style="list-style-type: none"> ■ Under SLR, commercial banks are mandated by RBI to maintain a stipulated proportion of their deposits in the form of liquid assets like cash, gold and unencumbered (free from debt) securities.
41.	a	<p>Space Debris?</p> <ul style="list-style-type: none"> ● About: <ul style="list-style-type: none"> ○ Space debris refers to man-made objects in Earth's orbit that no longer serve a useful purpose. <ul style="list-style-type: none"> ■ This includes defunct satellites, spent rocket stages, and fragments of debris from collisions or other events. ● Potential Hazard: <ul style="list-style-type: none"> ○ Threat for Operational Satellites: <ul style="list-style-type: none"> ■ The floating space debris is a potential hazard for operational satellites and colliding with them can leave the

		<p>satellites dysfunctional.</p> <ul style="list-style-type: none"> ■ This overpopulation of space with objects and debris is referred to as Kessler Syndrome. ○ Reduction of Orbital Slots: <ul style="list-style-type: none"> ■ The accumulation of space debris in specific orbital regions can limit the availability of desirable orbital slots for future missions. ○ Space Situational Awareness: <ul style="list-style-type: none"> ■ The increasing amount of space debris makes it more challenging for satellite operators and space agencies to accurately track and predict the orbits of objects in space.
42.	b	<p>Money illusion is an economic theory positing that people have a tendency to view their wealth and income in nominal dollar terms, rather than in real terms. In other words, it is assumed that people do not take into account the level of inflation in an economy, wrongly believing that a dollar is worth the same as it was the prior year.</p> <p>Money illusion is sometimes also referred to as price illusion.</p> <ul style="list-style-type: none"> ● Money illusion posits that people have a tendency to view their wealth and income in nominal dollar terms, rather than recognize their real value, adjusted for inflation. ● Economists cite factors such as a lack of financial education and the price stickiness seen in many goods and services as triggers of money illusion. ● Employers are sometimes said to take advantage of this, modestly lifting wages in nominal terms without actually paying more in real terms. <p>The term money illusion was first coined by American economist Irving Fisher in his book “Stabilizing the Dollar.” Fisher later wrote an entire book dedicated to the topic in 1928, titled “The Money Illusion.”</p> <p>British economist John Maynard Keynes is credited with helping to popularize the</p>

		term.
43.	d	<p>What is the NISAR Mission?</p> <ul style="list-style-type: none"> ● About: <ul style="list-style-type: none"> ○ NISAR has been built by space agencies of the US and India under a partnership agreement signed in 2014. ○ It is expected to be launched in January 2024 from Satish Dhawan Space Centre into a near-polar orbit. ○ The satellite will operate for a minimum of three years. ○ It is a Low Earth Orbit (LEO) observatory. ○ NISAR will map the entire globe in 12 days. ● Features <ul style="list-style-type: none"> ○ It is a 2,800 kilograms satellite consisting of both L-band and S-band Synthetic Aperture Radar (SAR) instruments, which makes it a dual-frequency imaging radar satellite. ○ While NASA has provided the L-band radar, GPS, a high-capacity solid-state recorder to store data, and a payload data subsystem, ISRO (Indian Space Research Organisation) has provided the S-band radar, the Geosynchronous Satellite Launch Vehicle (GSLV) launch system and spacecraft. <ul style="list-style-type: none"> ■ S band radars operate on a wavelength of 8-15 cm and a frequency of 2-4 GHz. Because of the wavelength and frequency, they are not easily attenuated. This makes them useful for near and far range weather observation. ○ It has a 39-foot stationary antenna reflector, made of a gold-plated wire mesh; the reflector will be used to focus “the radar signals emitted and received by the upward-facing feed on the instrument structure. <ul style="list-style-type: none"> ■ By using SAR, NISAR will produce high-resolution images.

		<p>SAR is capable of penetrating clouds and can collect data day and night regardless of the weather conditions.</p> <ul style="list-style-type: none"> ○ NASA requires the L-band radar for its global science operations for at least three years. Meanwhile, ISRO will utilise the S-band radar for a minimum of five years.
44.	b	<p>Core Inflation refers to changes in the prices of products and services, excluding those in the food and energy sectors. These items are not included in our estimate of inflation since their prices are unpredictable.</p> <p><u>Core Inflation</u></p> <ul style="list-style-type: none"> ● Core inflation is Headline inflation minus the Food and Fuel inflation. ● Headline inflation refers to the rate of change in the CPI, a measure of the average price of a standard basket of goods and services consumed by a typical family. ● Core inflation measures the change in average consumer prices after excluding transient or temporary price volatility, such as in commodities like food and energy. It reflects an economy's inflationary trend. ● Core inflation is seen as a leading predictor of long-term inflation. This is significant because it is used to determine how rising prices affect consumer income. ● Housing, education, household goods and services, transportation and communication, entertainment and amusement, and personal care are the main components of core inflation. This is one of the reasons why economists like Pronab Sen argue that the RBI should focus on core inflation rather than headline or CPI inflation. <p><u>Reasons for excluding Food and Energy Prices</u></p> <ul style="list-style-type: none"> ● Food and energy prices are not included in this computation since they are too volatile and fluctuate too much. ● Food and energy are essential commodities, therefore demand for them remains stable even as prices grow. Groceries, for example, you won't put

off buying groceries because the store's prices are increasing.

- **Speculation in energy and food commodities causes price volatility**, resulting in huge fluctuations in inflation figures. A drought, for example, can have a significant impact on crop prices.
- The impacts of these items on inflation can be **transient, implying that the market will eventually correct itself and return to a balanced position**. As a result, prices for basic products such as food and energy are not included in the computation of core inflation.

Importance of Core Inflation

- **Fluctuating prices confuse the economy's price signals and might result in resource misallocation**, maintaining price stability—avoiding high inflation rates or deflation over time—is critical. This is where Core inflation becomes important.
- Core inflation is **crucial to track** because it indicates the direct link **between the cost of goods and services and consumer income**. And as it removes the price of the volatile components, it is a better indicator of this link.
- As the core inflation avoids fluctuating prices, it is used to **predict future inflation better**.

Core Inflation and the Economy

- When transient price shocks are factored in, the anticipated overall inflation numbers may differ from real inflation. To rule out this possibility, **core inflation is calculated to determine actual inflation without taking into account transient shocks** or volatility.

The contrast between these different types of inflation is critical because they necessitate different government policy responses. The core inflation gives a clear indicator on the general level increase in prices compared to volatile commodities included in the calculation of the inflation.

45.

c

Nord Stream 1 subsea pipeline:

- Nord Stream 1 was completed in 2011 and **runs from Vyborg in Leningrad (Russia) to Lubmin near Greifswald, Germany.**
- **Majority ownership:** The Russian state-owned gas company Gazprom has a majority ownership in the pipeline
- **According to Bloomberg:** 40% of **Europe's** pipeline gas came from Russia before the war(now 9%).

Nord Stream 2:

- This is a **1,200-km pipeline** that runs from **Ust-Luga in Russia to Greifswald in Germany** through the Baltic Sea.
- It will carry **55 billion cubic meters** of gas per year.
- The Nord Stream crosses the **Exclusive Economic Zones (EEZs)** of several countries including:
 - **Russia**
 - **Finland**
 - **Sweden**
 - **Denmark**
 - **Germany**
- Territorial waters of:
 - **Russia**
 - **Denmark**
 - **Germany**

What will be the impact of the leaks?

- **The pipelines are unlikely to provide any gas to Europe:** In the forthcoming winter months, even if the political will to resume supply was found.
- **Gas price spike:** European gas prices spiked after reports of the leaks emerged.

		<ul style="list-style-type: none">● Environmental impact: Releasing GHGs(methane) will have an impact on the environment.
46.	a	<p>The Beijing Declaration was made during the Fourth World Conference on Women convened by the United Nations during 4 -1 5 September 1995 in Beijing, China.</p> <p>It was at this conference that the world agreed on a comprehensive plan to achieve legal equality on a global scale. The plan was known as the Beijing Platform for Action.</p> <p>Official Declaration: https://www.un.org/womenwatch/daw/beijing/platform/declar.htm</p> <p>The Beijing Platform for Action covers 12 critical areas of concern. They are as follows:</p> <ol style="list-style-type: none">1. Poverty2. Education and Training3. Health4. Violence5. Armed Conflict6. Economy7. Power and decision-making8. Institutional mechanisms9. Human rights10. Media11. Environment12. Girl Child <p>India's Progress</p> <ul style="list-style-type: none">● To assess progress and challenges to the implementation of the Beijing Declaration and Platform for Action in India over the past 5 years.

		<ul style="list-style-type: none"> ● The issue of gender equality has also been highlighted by the Economic Survey 2019-20 and points out that in achieving sustainable development goals (SDGs), India lags behind in Zero Hunger (SDG 2) and Gender Equality (SDG 5). Similarly, the SDG India Index by NITI Aayog raised the same concerns in achieving gender equality. <ul style="list-style-type: none"> ○ India has been ranked 112 among 153 countries in the annual Global Gender Gap Index for 2020, published by the World Economic Forum (WEF). ● Recent government schemes to achieve gender equality: <ul style="list-style-type: none"> ○ Beti Bachao Beti Padhao ○ Pradhan Mantri Matru Vandana Yojana ○ Scheme for Adolescent Girls ○ National Nutrition Mission (NNM) ○ Pradhan Mantri Mahila Shakti Kendra
47.	A	<p>Tear gas, also called lacrimator, is a group of substances that irritates the mucous membrane of the eyes. This causes a stinging sensation and tears. They may also irritate the upper respiratory tract, causing coughing, choking, and general debility (physical weakness).</p> <p>Trichloronitromethane or Chloropicrin or Tear Gas is prepared by heating chloroform with concentrated nitric acid.</p> <p>The effects of tear gases are temporary and reversible in most cases. Gas masks with activated charcoal filters provide good protection against them.</p> <p>Background: It was first used in World War I in chemical warfare, but since its effects are short-lasting and rarely disabling, it came into use by law-enforcement agencies as a means of dispersing mobs, disabling rioters, and flushing out armed suspects without the use of deadly force.</p> <p>Substances Used: The substances most often used as tear gases are synthetic</p>

		<p>organic halogen compounds. They are not true gases under ordinary conditions but are liquids or solids that can be finely dispersed in the air through the use of sprays, fog generators, or grenades and shells.</p> <ul style="list-style-type: none"> • Other compounds used in tear gas include Oleoresin Capsicum (OC, or pepper spray), bromoacetone, benzyl bromide, ethyl bromoacetate, xylol bromide, and α-bromobenzyl cyanide. <p>Types: The two most commonly used tear gases are:</p> <ul style="list-style-type: none"> • 1-chloroacetophenone (CN)- is widely used in riot control which chiefly affects the eyes, and • O-chlorobenzylidene malononitrile (CS)- is a stronger irritant that causes burning sensations in the respiratory tract and involuntary closing of the eyes.
48.	c	<p>Types of Demand for Grants</p> <p>Various other Grants are made by the Parliament under extraordinary or special circumstances.</p> <ul style="list-style-type: none"> • Supplementary Grants • Additional Grants • Excess Grants • Vote of Credit • Exceptional Grants • Token Grants <p>Supplementary Grants</p> <ul style="list-style-type: none"> • It is granted when the amount authorized by Parliament through the appropriation act for a specific service for the current fiscal year is found to be insufficient for that year.

- Before the **end of the fiscal year**, the grant is presented to Parliament and approved.
- Supplementary, additional, or excess grants are provided by **Article 115**.

Additional Grants

It is granted **when a need has arisen** during the current financial year for **additional expenditure** upon some new service not contemplated in the budget for that year.

Excess Grants

- It is granted **when money has been spent** on any service during a financial year in excess of the amount granted for that service in the budget for that year. It is **voted by the Lok Sabha** after the financial year.
- Before the demands for excess grants are submitted to the Lok Sabha for voting, they must be **approved by the Public Accounts Committee of Parliament**.

Vote of Credit

- It is granted for meeting an **unexpected demand** upon the resources of India, when on account of the magnitude or the indefinite character of the service.
- The **demand cannot be stated** with the details ordinarily given in a budget.

Exceptional Grants

- It is **not part of the current service** of any financial year.
- It is granted for a **special purpose**.

Token Grants

- It is granted when funds to meet the **proposed expenditure** on a **new**

		<p>service can be made available by reappropriation.</p> <ul style="list-style-type: none"> • Reappropriation involves transfer of funds from one head to another. It does not involve any additional expenditure. • Note: Supplementary, additional, excess, and exceptional grants, as well as votes of credit, are governed by the same method as a regular budget.
49.	a	<p>Capital expenditures create assets for the government and do not come under the heads of liabilities. whereas the other two statements denote actual liabilities incurred by the Government.</p>
50.	a	<p>Yaoshang festival begins in Manipur</p> <ul style="list-style-type: none"> • The festival is celebrated every year on the full moon of Lamta month (February-March) of the Meitei lunar calendar. • The festival is celebrated by the Meitei people who are predominantly Hindu. • It is celebrated at the same time as Holi and is known as 'Manipur's version of Holi'. • The five-day-long celebration begins with the burning of 'yaoshang' (a small thatch hut/straw hut) which is constructed with bamboo and straws on the first day • The highlight of the festival is the ThabalChongba, a traditional Manipuri folk dance where boys and girls hold hands and sing and dance in a circle. • The festival marks the rejuvenation of the spirit of life and commemorates the birthday of Chaitanya Mahaprabhu. • Children visit neighbours to ask for a monetary donation which is called <p>Meitei people</p> <ul style="list-style-type: none"> • Meiteis are the dominant population of Manipur in northeastern India. • A majority follow Hinduism while more than 8% are Muslims, locally known as

		<ul style="list-style-type: none"> • The Marup system (literally, "friendship association"), a type of cooperative saving and credit institution, is an intriguing aspect of Meitei village's socio-economic organisation. • They speak a Tibeto-Burman language, they differ culturally from the surrounding hill tribes by following Hindu customs.
51.	b	<p>Tropical dry evergreen forests of India</p> <ul style="list-style-type: none"> • The Tropical Dry Evergreen Forest is a unique forest found only in Tamil Nadu and Andhra Pradesh. • Its distribution is restricted to the narrow coastal strip from Vishakhapatnam in Andhra Pradesh in the north to Ramanathapuram in Tamil Nadu in the south. • The dissymmetric climatic condition of this region, where rainfall occurs both during summer and winter monsoons and extended the dry season from March to September, favours the development and sustenance of the Tropical Dry Evergreen forest in this narrow strip. • The TDEF has a mixture of trees, shrubs, lianas, and herbs and forms a complete canopy in pristine condition and provides habitat to a wide variety of animals including insects, amphibians, reptiles, and mammals.
52.	d	<p>A demand for granting Scheduled Tribe (ST) status to the Meiteis has found no takers among the political parties in poll-bound Manipur.</p> <ul style="list-style-type: none"> • The Meiteis are the dominant community in 40 of the 60 Assembly seats straddling the Imphal and Jiribam Valleys. <ul style="list-style-type: none"> ◦ A majority follow Hinduism while more than 8% are Muslims, locally known as Pangals. <p>About Meitei</p> <ul style="list-style-type: none"> • Meitei, also spelt Meetei or Meithei, also called Manipuri, dominant

		<p>population of Manipur in northeastern India.</p> <ul style="list-style-type: none"> ● They are predominantly Vaishnavite Hindus. ● They are divided into clans, the members of which do not intermarry. ● An interesting aspect of the village socio-economic organization in Meitei society is the Marup system (literally means friendship association), a type of cooperative saving and credit institution. ● Culture <ul style="list-style-type: none"> ○ They speak a Tibeto-Burman language, they differ culturally from the surrounding hill tribes by following Hindu customs. ● Economy ● Rice cultivation on irrigated fields is the basis of their economy. They are keen horse breeders, and polo is a national game. ● Field hockey, boat races, theatrical performances, and dancing—well known throughout India as the Manipuri style—are other pastimes.
53.	a	<p>International Criminal Court (ICC):</p> <ul style="list-style-type: none"> ● It is the only permanent international criminal tribunal. ● Background: It was created by the 1998 Rome Statute of the International Criminal Court (its founding and governing document), and began functioning on 1 July 2002 when the Statute came into force. ● Mandate: It investigates and, where warranted, tries individuals charged with the gravest crimes of concern to the international community: genocide, war crimes, crimes against humanity, and the crime of aggression. ● HQ: Hague, Netherlands. ● Members: 123 nations are States Parties to the Rome Statute and recognize the ICC's authority; the notable exceptions being the US, China, Russia, and India. ● Funding: The Court is funded by contributions from the States Parties and by voluntary contributions from Governments, international

organizations, individuals, corporations, and other entities.

- **Composition:**

- **Judges:** The court **has eighteen judges**, each from a **different member country**, elected to **nonrenewable nine-year terms**.
- **The Presidency:** Consists of **three judges** (the **President and two Vice-Presidents**) elected from among the judges. It **represents the Court to the outside world** and helps with the **organization of the work of the judges**.
- **Judicial Divisions:** **18 judges in 3 divisions**, the Pre-Trial Division, the Trial Division, and the Appeals Division.
- **Office of the Prosecutor (OTP):** OTP is responsible for **receiving referrals** and any **substantiated information on crimes** within the jurisdiction of the Court. OTP **examines these referrals and information, conducts investigations, and conducts prosecutions** before the Court.
- **Registry:** The core function of the Registry is to **provide administrative and operational support** to the Chambers and the Office of the Prosecutor.

- **Jurisdiction of ICC:**

- Unlike the International Court of Justice, which hears disputes between states, the **ICC handles prosecutions of individuals**.
- The ICC is only **competent to hear a case if:**
 - the **country where the offence was committed is a party** to the Rome Statute; or
 - the **perpetrator's country** of origin **is a party** to the Rome Statute
- The ICC may **only exercise its jurisdiction** if the **national court is unable or unwilling to do so**.
- The ICC **only has jurisdiction over offences committed after** the Statute's entry into force on **1 July 2002**.

- **Relation with UN:**

- While not a United Nations organization, the **Court has a**

		<p>cooperation agreement with the United Nations.</p> <ul style="list-style-type: none"> ○ When a situation is not within the Court's jurisdiction, the United Nations Security Council can refer the situation to the ICC, granting it jurisdiction.
54.	d	<ul style="list-style-type: none"> ● Parliament has been functioning without a deputy speaker, a post usually held by the main Opposition party, for nearly four years. <p>Deputy Speaker:</p> <ul style="list-style-type: none"> ● History: <ul style="list-style-type: none"> ○ The institutions of Speaker and Deputy Speaker originated in India in 1921 under the provisions of the Government of India Act of 1919(Montague-Chelmsford Reforms). ○ In 1921, Frederick Whyte and Sachidanand Sinha were appointed by the Governor-General of India as the first Speaker and the first Deputy Speaker (respectively) of the Central Legislative Assembly. ○ At that time, the Speaker and the Deputy Speaker were called the President and Deputy President, respectively, and the same nomenclature continued till 1947. ○ Mavalankarand Ananthasayanam Ayyangar had the distinction of being the first Speaker and the first Deputy Speaker (respectively) of the Lok Sabha. ● Constitutional Provision w.r.t. Office of Deputy Speaker: <ul style="list-style-type: none"> ○ Article 93 of the Constitution says that the House of the People (Lok Sabha) shall choose two members of the House to be, respectively, Speaker and Deputy Speaker. ○ The article also says that when the office of Speaker/Deputy Speaker becomes vacant, the House shall choose another member to be Speaker or Deputy Speaker. ● Election of Deputy Speaker:

- Like the Speaker, the **Deputy Speaker is also elected by the Lok Sabha itself from amongst its members.**
- He is elected **after the election of the Speaker** has taken place.
- **The date of election** of the Deputy Speaker is **fixed by the Speaker.**
- **Term of Office:**
 - Like the Speaker, the **Deputy Speaker remains in the office** usually **during the life of the Lok Sabha.** However, **he may vacate his office earlier** in any of the following **three cases** –
 - if **he ceases to be a member** of the Lok Sabha;
 - if **he resigns by writing to the Speaker;** and
 - if **he is removed by a resolution** passed by a **majority of all the then members** of the Lok Sabha. Such a resolution can be moved only after giving **14 days' advance notice.**
- **Role/Power of Deputy Speaker:**
 - The Deputy Speaker **performs the duties of the Speaker's office when it is vacant.**
 - He also **acts as the Speaker** when the **latter is** absent from the sitting of the House. In both cases, **he assumes all the powers of the Speaker.**
 - **Deputy Speaker is not subordinate to the Speaker.** He is directly **responsible to the House.**
 - He also **presides over the joint sitting** of both Houses of Parliament **in case the Speaker is absent** from such a sitting.
 - The Deputy Speaker has one special privilege, that is, **whenever he is appointed as a member of a parliamentary committee, he automatically becomes its chairman.**
 - **When the Speaker presides** over the House, **the Deputy Speaker is like any other ordinary member** of the House. **He can speak** in the House, **participate** in its proceedings, **and vote on any question** before the House.

<p>55.</p>	<p>b</p>	<p>BIMSTEC holds virtual ministerial meeting</p> <ul style="list-style-type: none"> • During the meeting, the Ministers approved several documents including rules of Procedure for Core BIMSTEC Mechanisms, Sectoral BIMSTEC Mechanisms and BIMSTEC's External Relations for submission to the 6th BIMSTEC Summit. • The meeting also approved the draft Host Country Agreement between India and the BIMSTEC Secretariat for establishing BIMSTEC Centre for Weather and Climate in India. • The Meeting also approved the Terms of Reference for an Eminent Person's Group on the Future Directions of BIMSTEC. • The Terms of Reference were finalized under the special scheme for institution building. • Besides BIMSTEC Bangkok Vision 2030 was also approved and will be launched at the 6th BIMSTEC Summit. • The Meeting also gave its nod to the Administrative and Disciplinary Rules of the Secretariat and amended Financial Rules and Regulations of the BIMSTEC Secretariat. <p>BIMSTEC</p> <ul style="list-style-type: none"> • It is a regional organization that was established on 06 June 1997 with the signing of the Bangkok Declaration. • Member countries: Bangladesh, India, Myanmar, Sri Lanka, Thailand, Bhutan and Nepal • The Chairmanship of BIMSTEC rotates according to the alphabetical order of the English names of the Member States. • During the Third BIMSTEC Summit, the Secretariat was established in Dhaka, Bangladesh.
<p>56.</p>	<p>d</p>	<p>Govt prohibits use of propylene glycol from supplier linked to Uzbekistan</p>

		<p>deaths</p> <p>Propylene Glycol:</p> <ul style="list-style-type: none"> ● Propylene glycol is a synthetic food additive that belongs to the same chemical group as alcohol. ● Characteristics of Propylene Glycol <ul style="list-style-type: none"> ○ Propylene glycol is a synthetic liquid substance that absorbs water. ○ It is a clear, colourless, slightly syrupy liquid at room temperature. ○ It may exist in air in the vapour form, although propylene glycol must be heated or briskly shaken to produce a vapour. ○ It is practically odorless and tasteless. <p>Uses of Propylene Glycol</p> <ul style="list-style-type: none"> ● Propylene glycol is used to make polyester compounds and as a base for deicing solutions. ● Propylene glycol is used by the chemical, food, and pharmaceutical industries as an antifreeze when leakage might lead to contact with food. ● It is used to absorb extra water and maintain moisture in certain medicines, cosmetics, or food products. ● It is a solvent for food colors and flavours and in the paint and plastics industries. ● Propylene glycol is also used to create artificial smoke or fog used in fire-fighting training and theatrical productions.
57.	a	<p>According to the latest Findex Report – 2021 by the World Bank, around one-third of adults still lack access to formal financial services.</p> <p>Various reports released by World Bank</p> <ol style="list-style-type: none"> 1. Ease of Doing Business 2. World Development Report

		<ol style="list-style-type: none"> 3. Global Economic Prospect (GEP) Report 4. Remittance Report 5. Ease of Living Index 6. India Development Update 7. Universal Health Coverage Index 8. The Service Trade Restriction Index
58.	d	<p>Even though it is the most fatal of natural hazards in India, lightning isn't classified as a natural disaster by the National Disaster Management Authority (NDMA), with repercussions down to the state level.</p> <p>https://theprint.in/environment/climate-change-is-leading-to-more-lightning-strikes-policymakers-need-to-take-note-to-save-lives/1427865/</p>
59.	a	<p>The intention to turn Hainan into a Free Trade Port was announced in 2018, and since then the province has been under continuous mutation. The plan presents three main stages during which the island will undergo a gradual process to implement policies that will build the conditions for trade liberalisation thanks to zero-tariff policies (due 2025), reduced restrictions on cross-border service trade, a simplified tax system (due 2035), and have a fully operating Free Trade Port by 2050 (China, 2021).</p> <p>https://www.europeanguanxi.com/post/de-isolation-of-an-island-how-hainan-develops-as-the-world-s-biggest-free-trade-port</p>
60.	C	<p>According to the Geneva-based DiploFoundation, India, Brazil, and South Africa, which have together formed the tripartite IBSA Forum, may play a prominent role in the process of reforming digital governance.</p> <p>IBSA</p>

		<ul style="list-style-type: none"> ● About: <ul style="list-style-type: none"> ○ The IBSA is a trilateral, developmental initiative between India, Brazil and South Africa to promote South-South cooperation and exchange. ● Formation: <ul style="list-style-type: none"> ○ The grouping was formalised and named the IBSA Dialogue Forum when the Foreign Ministers of the three countries met in Brasilia (Brazil) on 6th June 2003 and issued the Brasilia Declaration. ● Collaboration: <ul style="list-style-type: none"> ○ Joint Naval Exercise: <ul style="list-style-type: none"> ■ IBSAMAR (IBSA Maritime Exercise) is an important part of IBSA trilateral defence cooperation. ○ IBSA Fund: <ul style="list-style-type: none"> ■ Established in 2004, IBSA Fund (India, Brazil and South Africa Facility for Poverty and Hunger Alleviation) is a unique Fund through which development projects are executed with IBSA funding in fellow developing countries. ■ The fund is managed by the United Nations (UN) Office for South-South Cooperation (UNOSSC).
61.	a	<p>About Mount Merapi:</p> <ul style="list-style-type: none"> ● Mount Merapi (Mountain of Fire) is one of the world's most active volcanos located in ● It rises to 9,551 feet and has steep slopes with dense vegetation on its lower flanks. <p>Why do more volcanoes occur in Indonesia?</p> <ul style="list-style-type: none"> ● Indonesia is located on the Ring of Fire, a vast area around the Pacific Ocean. ● It consists of over 17,000 islands and islets — and nearly 130 active

		<p>volcanoes.</p> <ul style="list-style-type: none"> • The Ring of Fire also referred to as the Circum-Pacific Belt, is a path along the Pacific Ocean characterized by active volcanoes and frequent earthquakes. • The abundance of volcanoes and earthquakes along the Ring of Fire is caused by the amount of movement of tectonic plates in the area. • Along much of the Ring of Fire, plates overlap at convergent boundaries called subduction zones. That is, the plate that is underneath is pushed down, or subducted, by the plate above. As rock is subducted, it melts and becomes magma. • The abundance of magma so near to Earth's surface gives rise to conditions ripe for volcanic activity. • A significant exception is a border between the Pacific and North American Plates. This stretch of the Ring of Fire is a transform boundary, where plates move sideways past one another. • This type of boundary generates a large number of earthquakes as tension in Earth's crust builds up and is released.
62.	c	Twice in Article 19 and twice in right to Religious freedom under article 25 and 26.
63.	a	<p>Foster's rule is also known as the Island rule. It refers to the theory pertaining to the variation in the size of the body of species which are influenced by the availability of environmental resources. Briefly, it states that small animals may develop into bigger animals over a period of time when isolated on an island with abundant resources in the absence of predators.</p> <p>On the same lines, the theory propagates that, larger animals begin to shrink into smaller sizes when isolated on an island with very little to no resources available. The rule was proposed by Bristol Foster who published it in his paper titled</p>

		<p>'Evolution Of Mammals On Islands' in the year 1964.</p> <p>Foster compared 116 mainland varieties to their island species. He suggested that some creatures turned into smaller versions of themselves (insular dwarfism), while few others developed into bigger versions of self (insular gigantism). This proposal was governed by two factors –</p> <ul style="list-style-type: none"> ● Availability of resources and ● Absence of predation pressure from the mainland <p>This pointed towards the hypothesis that various species grow differently under varying conditions. The theory stayed for longer as it conveyed, small prey grow bigger in the absence of predators and with plenty of food resources around whereas predators who underwent competition on islands became smaller with fewer resource requisites.</p>
<p>64.</p>	<p>a</p>	<p>Hypersonic Missile</p> <ul style="list-style-type: none"> ● A hypersonic missile is a weapon system which flies at least at the speed of Mach 5 i.e. five times the speed of sound and is manoeuvrable. ● The manoeuvrability of the hypersonic missile is what sets it apart from a ballistic missile as the latter follows a set course or a ballistic trajectory. ● Thus, unlike ballistic missiles, hypersonic missiles do not follow a ballistic trajectory and can be manoeuvred to the intended target. ● The two types of hypersonic weapons systems are Hypersonic Glide Vehicles (HGV) and Hypersonic Cruise Missiles. <ul style="list-style-type: none"> ○ The HGV are launched from a rocket before gliding to the intended target while the hypersonic cruise missile is powered by air breathing high speed engines or 'scramjets' after acquiring their target. <p>What are the advantages of hypersonic missiles?</p>

		<ul style="list-style-type: none"> • They can enable responsive, long range strike options against distant, defended or time critical threats (such as road mobile missiles) when other forces are unavailable, denied access or not preferred. • Conventional hypersonic weapons use only kinetic energy i.e. energy derived from motion, to destroy unhardened targets or even underground facilities. <p>Are hypersonic missiles detectable in flight?</p> <ul style="list-style-type: none"> • Hypersonic weapons can challenge detection and defence due to their speed, manoeuvrability and low altitude of flight. • The Ground based radars or terrestrial radars cannot detect hypersonic missiles until late in the flight of the weapon. <ul style="list-style-type: none"> ○ This delayed detection makes it difficult for the responders to the missile attack to assess their options and to attempt to intercept the missile.
65.	b	<ul style="list-style-type: none"> • MAIA mission, is an effort to investigate the health impacts of tiny airborne particles polluting some of the world's most populous cities. • The satellite mission will aim to understand the effects of different types of particle pollution on human health. • Set to launch before the end of 2024, the MAIA observatory will consist of a satellite known as PLATiNO-2, provided by ASI, and a science instrument built at Nasa's Jet Propulsion Laboratory in southern California. • The mission will collect and analyze data from the observatory, sensors on the ground, and atmospheric models. • The science instrument on MAIA will have a pointable spectropolarimetric camera, which captures digital images at multiple angles in the ultraviolet, visible, near-infrared, and shortwave infrared portions of the electromagnetic spectrum. • MAIA will be able to collect measurements of sunlight reflecting off airborne particles, which will help researchers determine the abundance, size, and

		<p>optical properties of certain pollutants in the earth's atmosphere.</p> <ul style="list-style-type: none"> According to Nasa, this data will help the MAIA science team explore the geographic distribution of airborne particles and also investigate how they relate to the patterns and prevalence of health problems stemming from poor air quality.
66.	a	<p>Dudhwa Tiger Reserve:</p> <ul style="list-style-type: none"> It is located on the Indo-Nepal border in the district Lakhimpur-Kheri in Uttar Pradesh. Rivers: The Sharda River flows by the Kishanpur WL Sanctuary, the Geruwa River flows through the Katarniaghat WL Sanctuary and the Suheli and Mohana streams flow in the Dudhwa National Park, all of which are tributaries of the mighty Ghagra River. Dudhwa Tiger Reserve (DTR) comprises Dudhwa National Park (DNP) and Kishanpur and Katarniaghat wildlife sanctuaries. The Dudhwa National Park is a typical Tarai-Bhabar habitat of the upper Gangetic plains Biogeographic province. Flora: The vegetation is of the North Indian Moist Deciduous type, containing some of the finest examples of Sal forests (<i>Shorea robusta</i>) in India. Fauna: Tiger, Langu, Smooth Indian Otter, Hog Deer, Mugger, Ghariyal, Python, Sandboa, Banded krait, Russel's viper, Rat snake etc.
67.	d	<p>The Centre has decided to nominate the Charaideo Maidams in Assam for the UNESCO World Heritage Centre this year.</p> <ul style="list-style-type: none"> There is currently no World Heritage Site in the category of cultural heritage in Northeast India. The nomination of the Charaideo Maidams has attained significance at a time when the country is celebrating the 400th birth anniversary of

		<p>Lachit Borphukan.</p> <p>What is Charaideo Maidams?</p> <ul style="list-style-type: none"> ● The Charaideo Maidams, represents the late medieval (1319 century CE) mound burial tradition of the Tai Ahom community in Assam. ● It enshrines the mortal remains of the members of the Ahom royalty, who used to be buried with their paraphernalia. <ul style="list-style-type: none"> ○ After the 18 century, the Ahom rulers adopted the Hindu method of cremation and began entombing the cremated bones and ashes in a Maidam at Charaideo. ● Out of 386 Maidams or Moidams explored so far, 90 royal burials at Charaideo are the best preserved, representative of and the most complete examples of mound burial tradition of the Ahoms.
68.	c	<p>Japanese Encephalitis</p> <ul style="list-style-type: none"> ● About: <ul style="list-style-type: none"> ○ Japanese Encephalitis (JE) is a viral infection that can cause inflammation in the brain. <ul style="list-style-type: none"> ■ It is caused by a flavivirus that belongs to the same genus as dengue, yellow fever and West Nile viruses. ○ Japanese encephalitis virus (JEV) is also a major cause of Acute Encephalitis Syndrome (AES) India. ● Transmission: <ul style="list-style-type: none"> ○ The disease is transmitted to humans through bites from infected mosquitoes of the Culex species. ○ These mosquitoes breed mainly in rice fields and large water bodies rich in aquatic vegetation. ● Treatment: <ul style="list-style-type: none"> ○ There is no antiviral treatment for patients with JE. <ul style="list-style-type: none"> ■ Treatment, available, is supportive to relieve symptoms and

		<p>stabilise the patient.</p> <ul style="list-style-type: none"> ● Prevention: <ul style="list-style-type: none"> ○ Safe and effective JE vaccines are available to prevent the disease. <ul style="list-style-type: none"> ■ JE vaccination is also included under the Universal Immunisation Program of the Government of India. 										
69.	b	<table border="1"> <thead> <tr> <th>Buddhist Council</th> <th>Patron</th> </tr> </thead> <tbody> <tr> <td>1st Buddhist Council</td> <td>Ajatashatru</td> </tr> <tr> <td>2nd Buddhist Council</td> <td>Kalashoka</td> </tr> <tr> <td>3rd Buddhist Council</td> <td>Ashoka</td> </tr> <tr> <td>4th Buddhist Council</td> <td>Kanishka</td> </tr> </tbody> </table>	Buddhist Council	Patron	1st Buddhist Council	Ajatashatru	2nd Buddhist Council	Kalashoka	3rd Buddhist Council	Ashoka	4th Buddhist Council	Kanishka
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4th Buddhist Council	Kanishka											
70.	d	<ul style="list-style-type: none"> ● Thunder is the sound produced by the rapid expansion of air, when it is heated by a lightning bolt. ● The air expands so quickly that it makes a loud sound called thunder. 										
71.	a	<p>Indian Wild Ass:</p> <ul style="list-style-type: none"> ● It is a sub-species of Asian Wild Ass, i.e., Equus hemionus. ● Scientific name: Equus hemionus khur ● It is characterized by distinctive white markings on the anterior part of the rump and on the posterior part of the shoulder and a stripe down the back that is bordered by white. ● Distribution: World's last population of Indian WildAss is restricted to Rann of Kachchh, Gujarat. ● Habitat: Desert and grassland ecosystems. 										

		<ul style="list-style-type: none"> ● Conservation Status: <ul style="list-style-type: none"> ○ IUCN: Near threatened. ○ CITES: Appendix II ○ Wildlife Protection Act (1972): Schedule-I
72.	c	<p>Tashiding Monastery</p> <ul style="list-style-type: none"> ● It is one of the most sacred Buddhist pilgrimage sites, located on a hilltop overlooking the Rangyet River in Sikkim. ● Guru Padmasambhava, better known as Guru Rinpoche, the great Buddhist guru who brought Buddhism to Tibet, blessed the location of the monastery. ● A Nyingma teacher named Ngadak Sempa Chempo Phunshok Rigzing later founded the monastery in the 17th century.
73.	c	<p>Bio pesticides are made of living things, come from living things, or they are found in nature. They tend to pose fewer risks than conventional chemicals. Very small quantities can be effective and they tend to break down more quickly, which means less pollution.</p> <p>Types of bio pesticides:</p> <ul style="list-style-type: none"> ● Microbes – These are tiny organisms like bacteria and fungi. They tend to be more targeted in their activity than conventional chemicals. For example, a certain fungus might control certain weeds, and another fungus might control certain insects. The most common microbial bio pesticide is Bacillus thuringiensis. ● Plant-Incorporated Protectants (PIPs) – These are the genes and proteins, which are introduced into plants by genetic engineering. They allow the genetically modified plant to protect itself from pests, like certain insects or viruses.

		<ul style="list-style-type: none"> • Biopesticides are usually inherently less toxic than conventional pesticides.
74.	b	<p>THAAD: USA</p> <p>Iron Dome: Israel</p> <p>Iron Beam: Israel</p> <p>S400: Russia</p> <p>Advanced Air Defence: India</p>
75.	c	<p>CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora, also known as the Washington Convention) is a multilateral treaty to protect endangered plants and animals.</p> <p>The Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972, commonly called the “London Convention”.</p> <p>The Convention on the Conservation of Migratory Species of Wild Animals, also known as the Convention on Migratory Species (CMS) or the Bonn Convention.</p> <p>The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, usually known as the Basel Convention, is an international treaty that was designed to reduce the movements of hazardous waste between nations, and specifically to prevent transfer of hazardous waste from developed to less developed countries (LDCs).</p>
76.	b	<p>Sanjay Dubri Tiger Reserve:</p>


		<ul style="list-style-type: none"> ● Location: <ul style="list-style-type: none"> ○ It is located in the Sidhi district of Madhya Pradesh. ○ It is situated in the northeastern part of the state of MP and is bordered by the Guru Ghasidas National Park on the south. ● It consists of Sanjay National Park and Dubri Sanctuary, along with buffer areas taken from Sidhi and Shahdol districts. ● The reserve is part of the Bandhavgarh-Sanjay-Guru Ghasidas-Palamau landscape. ● It forms a wildlife corridor connecting Bandhavgarh and Palamau Tiger Reserve. ● Rivers: Banas, Gopad, Mawai, Mahan, Kodmar, Umrari and others. ● Flora: <ul style="list-style-type: none"> ○ It comprises of North Indian moist deciduous peninsular sal and North Indian dry deciduous peninsular sal. ○ The forests in the Dubri sanctuary range from dense to open sal forests with remains of degraded bamboo stumps. ● Fauna: The major species found are tiger, Sloth bear, Chital, Nilgai, Chinkara, Sambar, leopard, Dhole (wild dog), Jungle Cat, Hyena, Porcupine, Jackal, Fox, Indian Wolf, Indian Python Four-horned Antelope, and Barking deer.
77.	d	<p>History was made on August 26 when the proceedings from the Chief Justice's Court in the Supreme Court (SC) were live streamed. In the Swapnil Tripathi judgment, in September 2018, the SC had cleared the deck for live streaming of cases of national and constitutional importance.</p>
78.	c	<p>Coronal Mass Ejections (CMEs) are large expulsions of plasma and magnetic field from the Sun's corona. They can eject billions of tons of coronal material and carry an embedded magnetic field (frozen in flux) that is stronger than the background solar wind interplanetary magnetic field (IMF) strength. CMEs travel</p>

		<p>outward from the Sun at speeds ranging from slower than 250 kilometers per second (km/s) to as fast as near 3000 km/s.</p> <p>The fastest Earth-directed CMEs can reach our planet in as little as 15-18 hours. Slower CMEs can take several days to arrive. They expand in size as they propagate away from the Sun and larger CMEs can reach a size comprising nearly a quarter of the space between Earth and the Sun by the time it reaches our planet.</p>
79.	c	<p>Constitutional Bench of the Supreme Court</p> <ul style="list-style-type: none"> ● About: <ul style="list-style-type: none"> ○ A Constitution Bench is a bench of the Supreme Court having five or more judges on it. ○ These benches are not a routine phenomenon. ○ A vast majority of cases before the Supreme Court are heard and decided by a bench of two judges (called a Division Bench), and sometimes of three. ● Circumstances for Constitutional Bench to Exist: <ul style="list-style-type: none"> ○ Article 145(3): <ul style="list-style-type: none"> ■ Article 145(3) provides, "The minimum number of Judges who are to sit for the purpose of deciding any case involving a substantial question of law as to the interpretation of this Constitution or for the purpose of hearing any reference under Article 143 shall be five." ○ Article 143: <ul style="list-style-type: none"> ■ When the President seeks the Supreme Court's opinion under law under Article 143 of the Constitution. ■ As per the provision, the President of India has the power to address questions to the Supreme Court, which he deems

		<p>important for public welfare.</p> <ul style="list-style-type: none"> ■ The Supreme Court upon reference advises the President by answering the query. However, such referral advice by the apex court is not binding on the President, nor is it 'law declared by the Supreme Court'. <ul style="list-style-type: none"> ○ Conflicting Judgments: <ul style="list-style-type: none"> ■ When two or more three-judge benches of the Supreme Court have delivered conflicting judgments on the same point of law, necessitating a definite understanding and interpretation of the law by a larger bench. <ul style="list-style-type: none"> ■ The Constitution benches are set up on ad hoc basis as and when the above-mentioned conditions exist. <p>Why does CJI seek a Permanent Constitutional Bench?</p> <ul style="list-style-type: none"> ● Presently, Constitution Benches are set up on an ad hoc basis (particular purpose) as and when the need arises. ● It aims to help the judges identify, hear and provide relief in cases which need their urgent attention and also help litigants and lawyers to avoid delay in getting their cases listed for hearing before judges due to the long-winded processes of the Supreme Court Registry. ● It is also imperative because the Supreme Court's pendency has crossed over 71,000 from a little over 55,000 in 2017. <ul style="list-style-type: none"> ○ This is despite the fact that the sanctioned judicial strength of the court was increased to 34 judges in August 2019.
80.	d	<p>Sites of the Indus Valley Civilisation have been found in a large area extending from Sutkagen Dor in Balochistan near the Pakistan-Iran border to Rakhigarhi in Haryana's Hisar district, and from Manda in Jammu to Daimabad in Maharashtra. Other important sites of the Harappan civilization in India are at Lothal and Dholavira in Gujarat, and Kalibangan</p>

		in Rajasthan.
81.	a	The interest coverage ratio is a debt and profitability ratio used to determine how easily a company can pay interest on its outstanding debt. The interest coverage ratio is calculated by dividing a company's earnings before interest and taxes (EBIT) by its interest expense during a given period.
82.	a	Banihal Pass – Jammu and Kashmir Jeleppla Pass – Sikkim Bara Lacha La – Himachal Pradesh
83.	b	While hydrogen generated through renewable energy sources is green , it is blue when the carbon generated from the process is captured and stored without dispersing it in the atmosphere. When the carbon is not captured, the generated hydrogen is labelled grey. The major challenge in the usage of green hydrogen will be its storage . Given the very low density of hydrogen**, it will require large volumes for its storage.** Alternatively, if one chooses to store it in the liquid form, reducing the storage space requires the maintenance of temperatures as low as minus 253° C. This will entail huge costs. The 'production cost' of 'Green hydrogen' has been considered to be a prime obstacle to the usage of green hydrogen.

84.	d	
85.	c	<p>“Seaweed” is the common name for countless species of marine plants and algae that grow in the ocean as well as in rivers, lakes, and other water bodies.</p> <p>Some seaweeds are microscopic, such as the phytoplankton that live suspended in the water column and provide the base for most marine food chains. Some are enormous, like the giant kelp that grow in abundant “forests” and tower like underwater redwoods from their roots at the bottom of the sea. Most are medium-sized, come in colors of red, green, brown, and black, and randomly wash up on beaches and shorelines just about everywhere.</p> <p>Seaweed is chock-full of vitamins, minerals, and fiber.</p>
86.	d	
87.	a	<p>Nokrek Biosphere Reserve (West Garo Hills district of Meghalaya). Loktak Lake (located near Moirang in Manipur State). Barail is the highest hill range in Assam and it separates the State of Manipur from the State of Nagaland. Namdapha National Park (located between the Dapha Bum range of the Mishmi Hills and the Patkai range)</p>
88.	a	<p>Bengaluru to get Centre of Excellence for dragon fruit</p> <ul style="list-style-type: none"> • Dragon Fruit is a herbaceous perennial climbing cactus widely known as Pitaya, has its origin in Southern Mexico, Central America and South America. • Its flowers are hermaphrodites (male and female organs in the same

		<p>flower) in nature and open at night.</p> <ul style="list-style-type: none"> • It grows in all kinds of soil and does not require much water. • The plant sustains yield for more than 20 years, is high in nutraceutical properties(medicinal effects) and good for value-added processing industries. • It is widely cultivated in South-East Asia, India, the USA, The Caribbean Islands, and Australia throughout the tropical and sub-tropical world. • The world's largest producer and exporter of dragon fruit is Vietnam, where the plant was brought by the French in the 19th century. • In India, the cultivation of Kamalam Fruit is done in Karnataka, Kerala, Tamil Nadu, Maharashtra, Gujarat, Chhattisgarh, Odisha, West Bengal, Andhra Pradesh, Andaman & Nicobar Islands**, Mizoram and Nagaland**. • In this endeavor under the Mission for Integrated Development of Horticulture (MIDH), a roadmap is being prepared for the cultivation of this crop.
89.	b	
90.	b	<p>HC seeks report from Gujarat govt on mining leases granted within Wild Ass Sanctuary</p> <ul style="list-style-type: none"> • Location: It is located in the Little Rann of Kutch of the Gujarat State in India. • It is the only place where the Indian wild ass, locally called Khacchar, is found. • The sanctuary is home to a sizeable population of Rabari and Bharwad

		<p>tribes.</p> <ul style="list-style-type: none"> ● Topology: <ul style="list-style-type: none"> ○ It can be considered a large ecotone, a transitional area between marine and terrestrial ecosystems. ○ It is a continuum of a dry area of dark silt with salt encrustation. ○ It is dotted with about 74 elevated plateaus or islands, locally called 'bets'. ○ During the monsoon, large parts are flooded to depths of up to 2m. ● Flora: <ul style="list-style-type: none"> ○ It is full of dry thorny scrub, and there are no large trees except on the fringes and bets. ○ Some of the plants and trees that are found in this sanctuary are Morad, Unt morad, Theg, Dolari, Khijdo, Kerdo, Mithi jar, Kheri pilu, Akado, etc. ● Fauna: <ul style="list-style-type: none"> ○ Besides Indian Wild Ass, the other mammals found here include Blackbuck, Nilgai, Bluebull, Hare, Wolf, Foxes, Desert Cat, Indian fox, Jackal, Hyena, Wild boar, etc. ○ There is rich birdlife, including the Houbara bustard, Sandgrouse, Pale harrier, Black-shouldered kite, Pelican, etc.
91.	a	<p>Bolam Rule</p> <p>The Bolam rule has become a standard in medical jurisprudence in the United Kingdom (UK) and in India. In the recent past, this rule has been consistently applied in order to determine whether doctors have been guilty of negligence.</p> <p>https://www.epw.in/journal/2019/42/special-articles/medical-negligence-and-law.html</p>

92.	c	<p>Trindade Island</p> <ul style="list-style-type: none"> ● It is located in the South Atlantic Ocean. ● It is one of the world's most important conservation spots for green turtles, or Chelonia mydas, with thousands arriving each year to lay their eggs. ● The members of the Brazilian navy maintain a base on the island and protects the nesting turtles.
93.	b	<p>Antiquity</p> <ul style="list-style-type: none"> ● India's Antiquities and Art Treasures Act (AATA), 1972, defines "antiquity" as any coin, sculpture, painting, epigraph or other work of art or craftsmanship that has been in existence for not less than 100 years. <ul style="list-style-type: none"> ○ For a manuscript, record or other documents which are of scientific, historical, literary or aesthetic value, this duration is not less than 75 years. ● The UNESCO 1970 Convention defines "cultural property" as the one designated by countries having importance for archaeology, prehistory, history, literature, art or science. <p>How have Indian laws relating to the country's heritage evolved?</p> <ul style="list-style-type: none"> ● Before Independence, the Antiquities (Export Control) Act 1947 ensured that no antiquity could be exported without a license. ● After Independence, <ul style="list-style-type: none"> ○ All the Union, State and Concurrent Lists of the Schedule VII of the Indian Constitution deal with the country's heritage. ○ In 1958, The Ancient Monuments and Archaeological Sites and Remains Act was enacted. ○ A few incidents of theft of antiquities along with the UNESCO convention (1970), prompted the government to enact the AATA

1972.

Salient provisions of the AATA 1972:

- Other than the Central Government, **no person can export any antiquity or art treasure.**
- No person can carry on the business of selling any antiquity **except in accordance with the terms and conditions of a licence** – granted by the Archaeological Survey of India (ASI).
- After the AATA was implemented (1976), the Centre asked traders in antiquities and art objects **to declare their possessions of antiquities.**
- Every person who owns, controls or is in possession of any antiquity **shall register such antiquity** and obtain a certificate.
 - **What is the 'provenance' of antiquity?** It includes the list of all owners from the time the object left its maker's possession to the time it was acquired by the current owner.

Registered antiquities in India: So far, the National Mission on Monuments and Antiquities (2007), **has registered 3.52 lakh antiquities among the 16.70 lakh it has documented.**

Threats to antiquities:

- **The illicit import, export and transfer of ownership** of cultural property are one of the main causes of the impoverishment of the cultural heritage of the countries of origin (UNESCO).
- Almost 50 years after the UNESCO convention, the illicit international traffic of cultural items **is sadly increasingly prolific** [INTERPOL report (2019)].

Can India bring back antiquities?

- **There are three categories** – antiquities taken out of India pre-independence; taken out since independence and until the implementation

of AATA and antiquities taken out since 1976.

- **For items in the first category**, requests have to be raised bilaterally or on international fora.
- Antiquities in the **second and third categories** can be retrieved by raising an issue bilaterally with proof of ownership and with the help of the UNESCO convention.

94.

b



95.


c

Karnala Bird Sanctuary:

- Karnala Bird Sanctuary is located in the **Raigad District of Maharashtra**.
- It is a habitat of woodland birds in the Western Ghats & was one of the favoured areas of well-known ornithologist Dr Salim Ali.
- It also forms a catchment area of the **Patalganga River**.
- **Flora:** The Sanctuary area is covered with **mixed deciduous forest**.
- **Fauna:** Globally threatened and endemic birds like Long Billed Vultures, Malabar Gray Hornbill, Small Sun Bird and Shahin Falcon birds spp. are found in Karnala Bird Sanctuary.

<p>96.</p>	<p>b</p>	<p>Horseshoe crabs medicinally priceless and one of oldest living creatures on the earth, appear to be disappearing from their familiar spawning grounds due to destructive fishing practices along Chandipur and Balaramgadi coast in Odisha's Balasore district.</p> <p>India has two species of Horseshoe crabs- the coastal horseshoe crab (Tachypleus gigas), the mangrove horseshoe crab (Carcinoscorpius rotundicauda) and major concentration of the animal is found in Odisha. Both these species are not listed on IUCN red list yet but are part of Schedule 4 of Wildlife Protection Act, 1972.</p> <p>The blood of Horseshoe crab is very important for preparation of rapid diagnostic reagent. All injectable and medicines are tested with the help of Horseshoe crabs. A molecule has been developed from reagent of Horseshoe crab that would help treat pre-eclampsia ,a disease affecting pregnant women.</p> <p>Palaeontological studies say the age of Horseshoe crabs is 450 million years. The creature has lived on earth without undergoing any morphological change due to its strong immune system.</p> <p>https://www.youtube.com/watch?v=vF1FgCwnq4E</p>
<p>97.</p>	<p>c</p>	<ul style="list-style-type: none"> ● Cassini-Huygens was sent to study Saturn and its moons. It was a joint collaboration between NASA and European Space Agency. It was launched in 1997 and entered Saturn's orbit in 2004. The mission ended in 2017. ● Japan Venusian exploration -AKATSUKI (PLANET-C) is the next planetary exploration project for the Martian orbiter NOZOMI. This project's main purpose is to elucidate the mysteries of the Venusian atmosphere. ● NASA's Magellan mission to Venus was one of the most successful deep space missions. ● It was the first spacecraft to image the entire surface of Venus and made several discoveries about the planet it was launched on May 4,

		<p>1989.</p> <ul style="list-style-type: none"> On October 13, 1994, communication with Magellan was lost when it was instructed to descend into the atmosphere of Venus.
98.	a	
99.	d	<p>Bumchu is an annual holy water vase ritual commemorated in Tashiding Monastery, one of the most sacred Buddhist pilgrimage sites, located on a hilltop overlooking the Rangee River in Sikkim.</p> <p>Bumchu means “pot of sacred water” in Tibetan. The water inside the vase is shared among the worshippers. The water is thought to have healing qualities and to grant luck and riches to those who drink it. The celebration takes place on the 14th and 15th of the first lunar month, which often falls in February or March.</p> <p>Legend has it that in the eighth century, a great Buddhist guru who brought Buddhism to Tibet, blessed the location of the monastery. Later the monastery was founded in the 17th century.</p>

<p>100.</p>	<p>c</p>	
<p>101.</p>	<p>d</p>	<p>Keibul Lamjao National Park:</p> <ul style="list-style-type: none"> ● It is the world's only floating national park. ● Location: <ul style="list-style-type: none"> ○ It is located in the Bishnupur district in Manipur. ○ The park is located in the southwestern part of the famous Loktak Lake, which is well known for the floating biomass called phumdis. ● This is the last natural habitat of the endangered brow-antlered deer (Sangai deer), the dancing deer of Manipur. ● Vegetation: The park is a combination of wetland, terrestrial and aquatic ● Flora: <ul style="list-style-type: none"> ○ It comprises of Saccharum munja (Khoimom), <i>Zizania latifolia</i> (Wild Rice) (Ishing kambong), <i>Eiranthus procerus</i> (Singnang), <i>S. bengalensis</i>, <i>Cynodon dactylon</i> (Tinthou), <i>Discorea bulbifera</i> (Phumha) etc. ○ Another kind of aquatic flora, phumdis, can be found in two types phumdi aruppa (sinking) and phumdi ataoba (floating).

		<ul style="list-style-type: none"> ● Fauna: Includes Wild boar, Hog deer, common otter, Large Indian jungle cat, fox, Bay bamboo rat, golden cat, etc.
102.	c	<p>Physical activity can help patients with Parkinson's disease improve their quality of life: Research</p> <ul style="list-style-type: none"> ● It is a progressive neurological disorder that affects the nervous system and the parts of the body controlled by the nerves. ● It is a condition in which a patient holds limited or no control over his movements and body balance. ● It occurs and progresses with ageing, but in rare cases, it is also witnessed among children and teenagers as well. ● It has no cure. ● Many studies have suggested that men are more likely to be affected by Parkinson's than women. ● Cause: <ul style="list-style-type: none"> ○ It is caused by the degeneration of nerve cells in the part of the brain called the substantia nigra, which controls movement. ○ These nerve cells die or become impaired, losing the ability to produce an important chemical called dopamine. ○ Dopamine operates with other neurotransmitters to help coordinate the millions of nerve and muscle cells involved in the movement. ● Symptoms: <ul style="list-style-type: none"> ○ Tremors (trembling in the hands, arms, legs, and jaw); rigidity (stiffness of the limbs); slowness of movement; and impaired balance and coordination. ○ Parkinson's patients may also experience other symptoms such as difficulty in swallowing, chewing, and speaking, urinary problems, constipation, skin problems, depression, emotional changes, and sleep disruption.

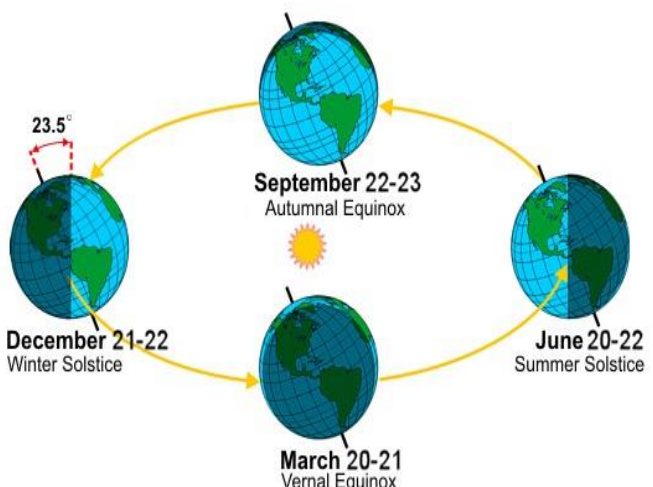
		<ul style="list-style-type: none"> Currently, no blood laboratory or radiological tests are available to diagnose Parkinson's disease.
103.	b	<ul style="list-style-type: none"> CHITTAURGARH in the state of Rajasthan is located on the banks of rivers Gambhiri and Bedach (a tributary of Bananas), At the foothills of this UNESCO World Heritage site is Chittaurgarh town, and on the eastern periphery of which there is yet another Heritage site - a Geo Heritage site near the village Bhojunda. This site is a Stromatolite Park, which was declared a National Geological Monument in the year 1976 by the Geological Survey of India. Stromatolites are bio chemical forms of rocks occurring in different shapes akin to the sedimentary rocks that can be found in shallow water by the trapping, binding and cementation of sedimentary grains by biofilms of microorganisms. These provide fascinating evidence of the emergence and evolution of life on the Earth. A small piece of Stromatolite encodes biological activity spanning thousands of years. So much so [what they can be termed as Earth's oldest fossils dating back to 3.5 billion years. The Bhojunda Stromatolite Park is an exposure within the massive Bhagwanpura Limestone of Lower Vindhyan age.
104.	b	<p>Zawar</p> <ul style="list-style-type: none"> It is an interesting geo-heritage site that lies some 40 km south of Udaipur which is the world's oldest known zinc-smelting site. The discovery here of earthen retorts – brinjal-shaped, long-necked vessels – is particularly significant: their presence here suggests Zawar had a unique zinc-smelting legacy. Zawar's zinc-smelting operations date back 2,000 years.
105.	d	<ul style="list-style-type: none"> Under limits of the territorial sea every State has the right to establish the

		<p>breadth of its territorial sea up to a limit not exceeding 12 nautical miles, measured from baselines determined in accordance with this Convention.</p> <ul style="list-style-type: none"> • Under INNOCENT PASSAGE IN THE TERRITORIAL SEA, Subject to this Convention, ships of all States, whether coastal or land-locked, enjoy the right of innocent passage through the territorial sea. • The exclusive economic zone is an area beyond and adjacent to the territorial sea, subject to the specific legal regime established in this Part, under which the rights and jurisdiction of the coastal State and the rights and freedoms of other States are governed by the relevant provisions of this Convention. Under this the exclusive economic zone shall not extend beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured.
106.	b	<p>Hindu Succession Act, 1956</p> <ul style="list-style-type: none"> • About: <ul style="list-style-type: none"> ○ The Mitakshara school of Hindu law codified as the Hindu Succession Act, 1956 governed succession and inheritance of property but only recognised males as legal heirs. • Applicability: <ul style="list-style-type: none"> ○ It applies to everyone who is not a Muslim, Christian, Parsi or Jew by religion. <ul style="list-style-type: none"> ■ Buddhists, Sikhs, Jains and followers of Arya Samaj, Brahmo Samaj, are also considered Hindus for this law. ○ Traditionally, only male descendants of a common ancestor along with their mothers, wives and unmarried daughters are considered a joint Hindu family. The legal heirs hold the family property jointly. • Hindu Succession (Amendment) Act, 2005: <ul style="list-style-type: none"> ○ The 1956 Act was amended in September 2005 and women were recognised as coparceners for property partitions arising from 2005.

		<ul style="list-style-type: none"> ■ Section 6 of the Act was amended to make a daughter of a coparcener also a coparcener by birth “in her own right in the same manner as the son”. <ul style="list-style-type: none"> ○ It also gave the daughter the same rights and liabilities “in the coparcenary property as she would have had if she had been a son”. ○ The law applies to ancestral property and to intestate succession in personal property, where succession happens as per law and not through a will.
107.	a	<p>Status of Forests in India</p> <ul style="list-style-type: none"> ● As per the India State of Forest Report-2021, forest and tree cover in the country increased by 2,261 square kilometres since the last assessment in 2019. ● India’s total forest and tree cover was 80.9 million hectares, which accounted for 24.62% of the geographical area of the country. <ul style="list-style-type: none"> ○ The report said 17 States and Union Territories had more than 33% of their area under forest cover. ○ Madhya Pradesh had the largest forest cover, followed by Arunachal Pradesh, Chhattisgarh, Odisha and Maharashtra. ○ The top five States in terms of forest cover as a percentage of their total geographical area were Mizoram (84.53%), Arunachal Pradesh (79.33%), Meghalaya (76%), Manipur (74.34%) and Nagaland (73.90%). <p>What is the Significance of Forests for India?</p> <ul style="list-style-type: none"> ● Ecosystem Services: One-third of the land on Earth is covered by forests, which play a vital role in maintaining the hydrological cycle, regulating climate, and preserving biodiversity. <ul style="list-style-type: none"> ○ For example, forests in the Western Ghats help to regulate the water cycle of southern states and protect against soil erosion.

		<ul style="list-style-type: none"> ● Hub of Biodiversity: India is home to a wide variety of plant and animal species, many of which are found only in the country's forests. <ul style="list-style-type: none"> ○ For example, the Sundarbans mangrove forests in the Bay of Bengal are home to the Royal Bengal tiger. ● Poverty Alleviation: Forests are also important for poverty alleviation. Forests provide more than 86 million green jobs. Everyone on the planet has had some form of contact with forests. ● Home of Tribal Community: They are also the homes of the tribal community. They are ecologically and economically a part and parcel of the forest environment. <ul style="list-style-type: none"> ○ For example, Gond tribes of Madhya Pradesh. ● Raw Material for Industries: Forests provide raw materials for a number of industries, viz. silk worm rearing, toy making, leaf plate making, plywood, paper and pulp etc. <ul style="list-style-type: none"> ○ They also provide major and minor forest produce: <ul style="list-style-type: none"> ■ Major such as timber, round wood, pulp-wood, charcoal and fire-wood ■ Minor produce like bamboo, spices, edible fruits and vegetables.
108.	b	<p>Global Terrorism Index:</p> <ul style="list-style-type: none"> ● It is published annually by the Institute for Economics and Peace (IEP), a global think tank headquartered in Sydney, Australia ● The index provides a comprehensive summary of the key global trends and patterns in terrorism over the past 15 years. ● The report ranks 163 countries (99.7% of the world's population) on the impact of terrorism. ● Indicators: Include the number of terrorist incidents, fatalities, injuries, and hostages. ● The index is produced using data from TerrorismTracker of Dragonfly-

		<p>which provides event records on terrorist attacks since January 1, 2007 -- and other sources.</p> <ul style="list-style-type: none"> ● Highlights of Global Terrorism Index 2023: <ul style="list-style-type: none"> ○ Afghanistan retains the top spot on the list of the country impacted by terrorism. Afghanistan has topped for the fourth consecutive year. ○ India ranked 13th on the index, marking only a marginal decrease from the previous year. ○ Pakistan saw the second-largest increase in terror-related fatalities globally last year, with a total of 643 dead. ○ Military people made up at least 55% of all casualties of terrorism.
<p>109.</p>	<p>b</p>	<p>Potentially deadly fungus spreading rapidly in US health care facilities</p> <p>Candida Auris (C. auris):</p> <ul style="list-style-type: none"> ● It is a multi-drug resistant fungus that is capable of causing invasive infections in the human body. ● It was first identified in Japan in 2009. ● How is it contracted? <ul style="list-style-type: none"> ○ Most cases of the fungus have been reported in healthcare settings, such as hospitals and nursing homes. ○ It is generally thought to be spread through contact with contaminated surfaces or by person-to-person transmission. ○ People who are already suffering from other medical conditions, recent hospital stays, and invasive devices are most at risk of contracting the fungus. ● How does the fungus act on the body? There are two ways C. auris can affect the body, <ul style="list-style-type: none"> ○ The fungus can either live on a specific region, such as the skin, rectum, or mouth, in a process called “asymptomatic

		<p>colonization,” where a patient has no symptoms but can spread it to other people.</p> <ul style="list-style-type: none"> ○ It can enter the bloodstream or wounds, where it can cause severe invasive infections. ● Symptoms: <ul style="list-style-type: none"> ○ Its symptoms are often similar to those of other common diseases and hence diagnosis is difficult. ○ The most common symptoms of C.auris include fever and chills that don't go away after treatment with antibiotics. ● Mortality Rate: It is estimated to be between 30-60%. ● Treatment: <ul style="list-style-type: none"> ○ Most C. auris infections are treatable with antifungal medications called echinocandins. ○ However, there has been a rise in cases resistant to the main three classes of antifungals available, making it harder to treat patients.
110.	b	<p>In the northern hemisphere ‘Second half of the month June (21st June)’ is the</p> <div style="text-align: center;">  <p>The diagram illustrates Earth's orbit around the Sun. The Earth's axis is tilted at 23.5 degrees. The four seasons are labeled: Winter Solstice (December 21-22), Vernal Equinox (March 20-21), Summer Solstice (June 20-22), and Autumnal Equinox (September 22-23). The Sun is shown at the center of the orbit.</p> </div> <p>longest day of the year.</p>
111.	d	<ul style="list-style-type: none"> ● Thermal Treatment Technologies:

		<ul style="list-style-type: none"> ○ The thermal treatment of hazardous waste involves pyrolysis, gasification, and incineration techniques, depending upon the nature of the waste and the end-product application. <ul style="list-style-type: none"> ■ Pyrolysis is the heating of an organic material, such as biomass, in the absence of oxygen. Biomass pyrolysis is usually conducted at or above 500 °C, providing enough heat to deconstruct the strong biopolymers. ■ Gasification is a process that converts organic or fossil-based carbonaceous materials at high temperatures (>700°C), without combustion, with a controlled amount of oxygen and/or steam into carbon monoxide, hydrogen, and carbon dioxide. ■ Incineration is a rapid oxidation process, which is used to convert VOCs (Volatile Organic Compounds) and other gaseous hydrocarbon pollutants to carbon dioxide and water. ■ Torrefaction converts biomass in the absence of oxygen at a temperature of 200–300°C to produce torrefied materials, bio-oils, biochar, etc.
112.	c	<p>It is a thermal process used to produce high-grade solid biofuels from various streams of woody biomass or agro residues.</p> <p>The end product is a stable, homogeneous, high quality solid biofuel with far greater energy density and calorific value than the original feedstock, providing significant benefits in logistics, handling and storage, as well as opening up a wide range of potential uses.</p>
113.	b	Sandalwood

		<ul style="list-style-type: none"> ● About: Santalum album, commonly known as Indian Sandalwood, is a dry deciduous forest species native to China, India, Indonesia, Australia, and the Philippines. <ul style="list-style-type: none"> ○ Sandalwood has been long associated with the Indian heritage & culture, as the country contributed 85% of the world' sandalwood trade erstwhile. However, lately this has been declining at a fast rate. ● Features: This small tropical tree grows to 20m high with red wood and a variety of dark colors of bark (dark brown, reddish and dark grey). ● Uses: Because it is strong and durable, Sandalwood is mostly harvested for its timber. <ul style="list-style-type: none"> ○ Indian Sandalwood is one of the most sacred herbs of Ayurveda. ● Distribution in India: In India, sandalwood is mostly grown in Andhra Pradesh, Telangana, Bihar, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, and Tamil Nadu. <ul style="list-style-type: none"> ○ Karnataka is sometimes called as 'Gandhara Gudi' or the land of sandalwood. The art of sandalwood carving has been an integral part of Karnataka's cultural heritage for centuries. Its earliest origins can be traced back to the 3rd century B.C. The state has also set up a Sandalwood Development Board to ensure that the resources are sustainably managed. ● IUCN Red List Status: Vulnerable.
114.	c	<ul style="list-style-type: none"> ● In Buddhism, mudras are hand gestures or positions that are used during meditation and other practices to help focus the mind, channel energy, and deepen one's connection to the teachings. Here are some of the mudras commonly used in Buddhism: <ul style="list-style-type: none"> ○ Dhyana Mudra: In this mudra, the hands are placed on the lap, with the right hand on top of the left, and the thumbs touching. <ul style="list-style-type: none"> ■ This mudra symbolizes meditation, concentration, and inner peace.

- **Anjali Mudra:** This is the most common mudra used in Buddhism, and it involves pressing the **palms together in front of the chest, with the fingers pointing upwards.**
 - It represents respect, greeting, and gratitude.
- **Vitarka Mudra:** This mudra is also known as the "**teaching mudra**" or "**gesture of discussion,**" and it involves **holding the right hand up, with the thumb and index finger touching to form a circle.**
 - It represents the transmission of knowledge and the communication of the Buddha's teachings.
- **Varada Mudra:** In this mudra, **the right hand is extended downwards, with the palm facing outwards.**
 - It represents generosity, compassion, and the granting of wishes.
- **Abhaya Mudra:** This mudra involves **raising the right hand up to shoulder height, with the palm facing outwards.**
 - It represents fearlessness, protection, and the dispelling of negativity.
- **Bhumisparsha Mudra:** This mudra involves **touching the ground with the fingertips of the right hand, while the left hand rests on the lap.**
 - It represents the moment of the Buddha's enlightenment, and the gesture symbolizes the earth witnessing his attainment of enlightenment.
- **Uttarabodhi Mudra:** In this the **hands are held in front of the chest with the fingers of the left hand pointing upward and the fingers of the right hand pointing downward. The thumbs are then placed together in the center, creating a triangle shape.**
 - This mudra represents the union of wisdom and compassion, the balance of masculine and feminine energies, and the attainment of enlightenment through the integration of all aspects of thyself.
- **Dharma Chakra Mudra:** In this **the hands are held in front of the**

chest with the thumb and index finger of each hand forming a circle. The remaining three fingers of each hand are extended upwards, representing the Three Jewels of Buddhism: **the Buddha, the Dharma (his teachings), and the Sangha (the community of practitioners).** The circle made by the thumb and index finger represents the wheel of the Dharma, which

- This mudra represents the constant cycle of birth, death, and rebirth, and the Buddha's teachings as the means to break free from this cycle.
- **Karana Mudra:** In this the **left hand is brought up to the heart, palm facing forward. The index and little fingers point straight upward. while the other three fingers are curled towards the palm.**
 - This gesture is often seen in depictions of the Buddha or bodhisattvas, as a symbol of protection and dispelling of negativity. The index finger is said to represent the energy of wisdom and the ability to overcome obstacles.
- **Jnana Mudra:** In this the **index finger and thumb are brought together to form a circle, while the other three fingers are extended outwards.**
 - This gesture represents the unity of individual consciousness with the universal consciousness, and the connection between the practitioner and the teachings of the Buddha.
- **Tarjani Mudra:** In this, the index finger is extended upward, while the other fingers are curled towards the palm. Tarjani Mudra, also known as the "threatening gesture"
 - It is used as a symbol of warning or protection against evil forces or harmful influences.

115.

a

6G Technology













		<ul style="list-style-type: none"> ● 6G (Sixth-Generation Wireless) is the successor to 5G cellular technology. ● It will be able to use higher frequencies than 5G networks and provide substantially higher capacity and much lower latency (delay). ● One of the goals of 6G internet will be to support one microsecond-latency communication (delay of one-microsecond in communication). <ul style="list-style-type: none"> ○ This is 1,000 times faster - or 1/1000th the latency - than one millisecond throughput. ● It seeks to utilize the terahertz band of frequency which is currently unutilized. <ul style="list-style-type: none"> ○ Terahertz waves fall between infrared waves and microwaves on the electromagnetic spectrum. ○ These waves are extremely tiny and fragile, but there's a huge amount of free spectrum up there that would allow for spectacular data rates.
116.	d	<p>The rankings in Figure 2.1 of <i>World Happiness Report 2023</i> use data from the Gallup World Poll surveys from 2020 to 2022. They are based on answers to the main life evaluation question asked in the poll. This is called the Cantril ladder: it asks respondents to think of a ladder, with the best possible life for them being a 10 and the worst possible life being a 0. They are then asked to rate their own current lives on that 0 to 10 scale. The rankings are from nationally representative samples for the years 2020-2022. The number of people and countries surveyed varies year to year, but by and large more than 100,000 people in 130 countries participate in the Gallup World Poll each year. They are based entirely on the survey scores, using the Gallup weights to make the estimates representative. The sub-bars in the alternate version of Figure 2.1 show the estimated extent to which each of the six factors (levels of GDP, life expectancy, generosity, social support, freedom, and corruption) is estimated to contribute to making life evaluations higher in each country than in Dystopia. Dystopia is a</p>

hypothetical country with values equal to the world's lowest national averages for each of the six factors (see FAQs: What is Dystopia?). The sub-bars have no impact on the total score reported for each country but are just a way of explaining the implications of the model estimated in Table 2.1. People often ask why some countries rank higher than others—the sub-bars (including the residuals, which show what is not explained) attempt to answer that question.

<https://worldhappiness.report/faq/>

117. a

118. b

			
Bhumisparsa Mudra Touching the earth as Gautama did, to invoke the earth as witness to the truth of his words.	Varada Mudra Fulfillment of all wishes; the gesture of charity.	Dhyana Mudra The gesture of absolute balance, of meditation. The hands are relaxed in the lap, and the tips of the thumbs and fingers touch each other. When depicted with a begging bowl this is a sign of the head of an order.	Abhaya Mudra Gesture of reassurance, blessing, and protection. "Do not fear."
			
Dharmachakra Mudra The gesture of teaching usually interpreted as turning the Wheel of Law. The hands are held level with the heart, the thumbs and index fingers form circles.	Vitarka Mudra Intellectual argument, discussion. The circle formed by the thumb and index finger is the sign of the Wheel of Law.	Tarjani Mudra Threat, warning. The extended index finger is pointed at the opponent.	Namaskara Mudra Gesture of greeting, prayer, and adoration. Buddhas no longer make this gesture because they do not have to show devotion to anything.
			
Jnana Mudra Teaching. The hand is held at chest level and the thumb and index finger again form the Wheel of Law.	Karana Mudra Gesture with which demons are expelled.	Ksepama Mudra Two hands together in the gesture of 'sprinkling' the nectar of immortality.	Uttarabodhi Mudra Two hands placed together above the head with the index fingers together and the other fingers intertwined. The gesture of supreme enlightenment.

119.	d	
120.	d	<p>Mangoes for export are brought to Lasalgaon for irradiation. It involves exposing the produce to gamma radiation for a short period of time. This kills microbes and increases shelf life. The summer crop of onions harvested early April if irradiated can be stored for more than six-seven months.</p> <p>https://indianexpress.com/article/cities/mumbai/facility-to-increase-shelf-life-of-onions-lies-unused-in-nashik/</p>
121.	c	<p>Union Minister inaugurates Asia's largest 4-metre International Liquid Mirror Telescope at Devasthal in Uttarakhand</p> <ul style="list-style-type: none"> ● ILMT is the first liquid mirror telescope designed exclusively for astronomical observations and is the first optical survey telescope in India. ● It has a 4-meter-diameter rotating mirror made up of a thin layer of liquid mercury to collect and focus light. ● The metal mercury is in liquid form at room temperature, which is highly reflective and designed to survey the strip of the sky passing overhead each night. ● The Devasthal observatory is equipped with the largest aperture telescope available in India that will use Big Data and Artificial Intelligence/Machine Learning (AI/ML) algorithms to classify objects in the sky. ● The telescope has three components: A bowl containing a reflecting liquid mercury metal, an air bearing (or motor) on which the liquid mirror sits, and a drive system. ● The mercury is protected from the wind by a scientific grade thin transparent film of mylar.

		<ul style="list-style-type: none"> • The reflected light passes through a sophisticated multi-lens optical corrector that produces sharp images over a wide field of view and a 4k CCD camera, located above the mirror at the focus, records 22 arc-minute wide strips of the sky. • The data collected from the ILMT, over an operational time of 5 years, will be ideally suited to perform a deep photometric and astrometric variability survey. • Maintained by the Aryabhata Research Institute of Observational Sciences (ARIES).
122.	c	<p>Dachigam National Park</p> <ul style="list-style-type: none"> • The actual beauty of the park lies in the deep valleys, rocky outcrops, steep wooded slopes and rolling alpine pastures. • Being located in a mountainous area, Dachigam National Park faces a huge variation in altitude that ranges from 1600 m to 4200 m above sea level. • This variation in altitude categorises Dachigam National Park into two regions- the upper region and the lower region. • Flora: It is extremely rich in Wild Cherry, Pear, Plum, Peach, Apple, Apricot, Walnut, Chestnut, Oak, Willow, Poplar, Chinar, Birch, Pine and Elm. • Fauna: Hangul (Kashmir Stag), Musk deer, Brown Bear, Leopards, Jungle Cats, Himalayan black bear, and a few species of wild goats like the markhor and ibex.
123.	c	<p>Recent Census shows increased population of endangered Hangul at Dachigam National Park</p> <ul style="list-style-type: none"> • The Kashmir stag also called hangul is a subspecies of Central Asian red deer endemic to Kashmir and surrounding areas. • It is found in dense riverine forests in the high valleys and mountains of

		<p>Jammu and Kashmir and northern Himachal Pradesh.</p> <ul style="list-style-type: none"> ● In Kashmir, it is found primarily in the Dachigam National Park where it receives protection. ● A small population has also been witnessed in Overa-Aru Wildlife Sanctuary in south Kashmir. ● Conservation status <ul style="list-style-type: none"> ○ IUCN: Critically Endangered ○ CITES : Appendix I
<p>124.</p>	<p>c</p>	<p>Free of encroachments, Mahim Fort to be turned into a tourist spot</p> <p>Mahim Fort:</p> <ul style="list-style-type: none"> ● Location: It is a fort in Mahim in Mumbai, Maharashtra state. ● The fort was built by Maharaja Pratapbimb of the Rajput dynasty in the 11th century AD. ● History: <ul style="list-style-type: none"> ○ In 1516, Portuguese commander Dom Joao de Monoy entered the Mahim Creek and defeated the commander of the Mahim fort. ○ The fort was the site of frequent skirmishes between the Portuguese and the Ali Shah, a Gujarati ruler before the island of Mahim was appropriated from Bahadur Shah of Gujarat by the Portuguese in 1534. ○ In 1661, the Portuguese ceded the island of Mahim as dowry to Charles II of England. ○ After the English gained control of the fort, it was strengthened by Sir Thomas Grantham in 1684 and became a strategic watchtower against possible Portuguese attacks and later from the Marathas. ○ In 1772, the Portuguese attempted to attack this fort, but they were repelled by the British with cannonballs. ● Architecture: <ul style="list-style-type: none"> ○ The present structure seen here is the last modified structure by

		<p>the British East India Company.</p> <ul style="list-style-type: none"> ○ The building material used here is Sea rocks, limestones, and granite stones. ○ This fort is unique for its masonry rock works. ○ The total design of this fort looks square and rectangular shape when seen from the outer side. ○ The main fortification walls are built high and thick. ○ There are many bastions found on these walls, which are in a square model.
125.	b	<p>The “Right to be Forgotten” is the right to remove or erase content so that it’s not accessible to the public at large. It empowers an individual to have information in the form of news, video, or photographs deleted from internet records so it doesn’t show up through search engines, like Google in the present case.</p> <p>Section 43A of the Information Technology Act, 2000 says that organizations who possess sensitive personal data and fail to maintain appropriate security to safeguard such data, resulting in wrongful loss or wrongful gain to anyone, may be obligated to pay damages to the affected person.</p> <p>While, the IT Rules, 2021 do not include this right, they do however, lay down the procedure for filing complaints with the designated Grievance Officer so as to have content exposing personal information about a complainant removed from the internet.</p> <p>While the right is not recognized by a law or a statute in India expressly, the courts have repeatedly held it to be endemic to an individual’s Right to Privacy under Article 21 since the Apex Court’s 2017 ruling in “K.S.Puttaswamy vs Union of India”.</p> <p>The Right to be Forgotten originates from the 2014 European Court of</p>

		<p>Justice ruling in the case of “Google Spain SL, Google Inc v Agencia Española de Protección de Datos, Mario Costeja González”, where it was codified for the first time following a Spanish man’s quest to make the world forget a 1998 advertisement saying “his home was being repossessed to pay off debts.”</p>
126.	c	<p>The G20 or Group of 20 is an intergovernmental forum comprising 19 countries and the European Union (EU). The G20 was founded in 1999 in response to several world economic crises.</p> <p>The G20 Summit is formally known as the “Summit on Financial Markets and the World Economy”.</p> <p>The first G20 Summit was held in 2008 in Washington DC (USA)</p>
127.	c	<p>How is a Money Bill different from a Financial bill</p> <ul style="list-style-type: none"> ● While all Money Bills are Financial Bills, all Financial Bills are not Money Bills. ● For example, the Finance Bill, which only contains provisions related to tax proposals, would be a Money Bill. ● However, a Bill that contains some provisions related to taxation or expenditure but also covers other matters would be considered a Financial Bill. ● The Rajya Sabha cannot amend or reject the money bill, but it has the power to amend or reject the finance bill. ● Money bills and finance bill (1) can be introduced only in the Lok Sabha, whereas a Finance Bill (2) can be introduced both in Rajya Sabha and the Lok Sabha. ● To resolve a deadlock, the President can summon a joint sitting of Lok Sabha and the Rajya Sabha in case it is a finance bill. However, no such

		provision is made in case of a money bill.
128.	c	<p>Securities Transaction Tax (STT):</p> <ul style="list-style-type: none"> • What is it? It is a direct tax charged on the purchase and sale of securities listed on the recognized stock exchanges in India. • It is levied and collected by the central government of India. • STT is governed by Securities Transaction Tax Act (STT Act), and STT Act has specifically listed various taxable securities **transactions,**e., transactions on which STT is leviable. • Taxable securities include equities, derivatives, or equity-oriented mutual funds investment units (excluding commodities and currency). • The rate of taxation is different for different types of securities. • STT is not applicable to off-market transactions or to commodity or currency transactions. • The liability of applying the STT is on the broker when the client undertakes transactions in the stock market. The collected amount is then paid to the government. • The charges and rate of STT are reflected on the contract notes which a broker provides to its clients for every execution of trades.
129.	d	<p>India has introduced a draft to launch a global initiative to encourage the consumption and production of millet. The draft of the proposed initiative — MIIRA — was placed during the first Agriculture Deputies Meeting under the Agriculture Working Group (AWG), G20 at Indore, Madhya Pradesh on February 13-15, 2023.</p> <p>The acronym MIIRA stands for 'Millet International Initiative for Research</p>

		<p>and Awareness’.</p> <p>According to Agriculture Ministry sources, the MIIRA will be aimed at coordinating millet research programmes at the international level. It is in line with the UN declaring 2023 as the International Year of Millets, the proposal for which was moved by India and supported by 72 countries.</p> <p>MIIRA will aim to connect millet research organisations across the world while also supporting research on these crops.</p>
130.	d	<p>Recently, Sarus Crane, Uttar Pradesh's state bird, was recently rescued and transported to Raebareli's Samaspur Bird Sanctuary. A day after the bird was taken to the sanctuary, it was claimed that the bird was missing.</p> <p>The scientific name of Sarus Crane is Grus Antigone. It is the tallest flying bird in the world, standing 152-156 cm tall with a wingspan of 240cm. The Sarus crane has predominantly grey plumage with a naked red head and upper neck and pale red legs. It is known to mate for life with a single partner, and its breeding season coincides with heavy rains during the monsoon season.</p> <p>The sarus crane is listed in Schedule IV of the Wildlife Protection Act of 1972 and as vulnerable on the IUCN Red List, and it is predominantly found in India, Southeast Asia, and Australia.</p>
131.	c	
132.	b	Western Disturbances

		<ul style="list-style-type: none"> ● About: <ul style="list-style-type: none"> ○ Western Disturbances are a series of cyclonic storms that originate in the Mediterranean region, travel over 9,000 km to bring winter rains to northwest India. <ul style="list-style-type: none"> ■ A Western Disturbance collects moisture from the Mediterranean Sea, Black Sea, and Caspian Sea and traverses over Iran and Afghanistan before hitting the western Himalayas. ○ While the storm systems occur throughout the year, they travel to India mostly between December and April because the trajectory of the subtropical westerly jet stream, which transports them, shifts during the winter months to the rim of the Himalayas. <ul style="list-style-type: none"> ■ For the rest of the year, the jet stream travels from above the Himalayas to the Tibetan Plateau and China. Its trajectory changes as per the position of the Sun. ● Significance for India: <ul style="list-style-type: none"> ○ Western Disturbances are the primary source of snowfall that replenishes the Himalayan glaciers during winter. <ul style="list-style-type: none"> ■ These glaciers feed major Himalayan rivers like the Ganga, Indus and Yamuna as well as myriad mountain springs and rivulets. ○ These low-pressure storm systems help farmers in India grow their rabi crop. ● Issues: <ul style="list-style-type: none"> ○ The Western Disturbances are not always the harbingers of good weather. Sometimes WDs can cause extreme weather events like floods, flash floods, landslides, dust storms, hail storms and cold waves, destroying infrastructure and impacting life and livelihoods.
133.	a	Moray Eel

		<ul style="list-style-type: none"> • Moray Eels occur in all tropical and subtropical seas, they live in shallow water among reefs and rocks. • They are known for two types of jaws: one is regular (oral) jaws with big teeth and the second jaw is called the pharyngeal jaw (which drags prey inside the eels stomach). • Their IUCN red list status is Least Concern (LC). • Including the newly discovered species, 29 species of Gymnothorax have been documented in Indian waters so far.
134.	d	<p>About the Abel Prize</p> <p>It was first awarded in 2003 and recognizes pioneering achievements in mathematics, named after Norwegian mathematician Niels Henrik Abel.</p> <p>The prize includes a monetary award of roughly \$720,000 and a glass plaque designed by Norwegian artist Henrik Haugan.</p>
135.	a	
136.	d	
137.	c	<p>Kanheri caves</p> <ul style="list-style-type: none"> • The Kanheri Caves are a group of caves and rock-cut monuments cut into a massive basalt outcrop in the forests of the Sanjay Gandhi National Park, western outskirts of • The Kanheri caves comprise more than 110 different rock-cut monolithic excavations and are one of the largest single excavations in the country. • These excavations were primarily undertaken during the Hinayana phase of

Buddhism but also have several examples of the Mahayana stylistic architecture as well as a few printings of the Vajrayana order.

- The name Kanheri is derived from 'Kanhagiri' in Prakrit and occurs in the Nasik inscription of the **Satavahana ruler Vasisthiputra Pulumavi**.
- They contain Buddhist sculptures and relief carvings, paintings and inscriptions, dating from the **1st century CE to the 10th century CE**.
- The earliest reference to Kanheri is ascribed to Fa-Hein who visited India during 399-411 CE.

138.

a

Year	Location	President	Importance
1885	Bombay	W C Bonnerjee	1st session attended by 72 delegates
1886	Calcutta	Dadabhai Naoroji	National Congress and National Conference
1887	Madras	Syed Badruddi	Appeal made to

		n Tyabji	Muslims to join hands with other national leaders
1888	Allahabad	George Yule	First English president
1889	Bombay	Sir William Wedderburn	–
1890	Calcutta	Feroz Shah Mehta	–
1891	Nagpur	P. Ananda Charlu	–
1892	Allahabad	W C Bonnerjee	–
1893	Lahore	Dadabhai	–

		Naoroji	
1894	Madras	Alfred Webb	–
1895	Poona	Surendra nath Banerjee	–
1896	Calcutta	Rahimtullah M. Sayani	National song 'Vande Mataram' sung for the first time
1897	Amravati	C. Sankaran Nair	–
1898	Madras	Ananda Mohan Bose	–
1899	Lucknow	Romesh Chandra Dutt	–

		1900	Lahore	N G Chandava rkar	–
		1901	Calcutta	Dinshaw E. Wacha	–
		1902	Ahmedab ad	Surendra nath Banerjee	–
		1903	Madras	Lal Mohan Ghosh	–
		1904	Bombay	Sir Henry Cotton	–
		1905	Benares	Gopal Krishna Gokhale	Expresse d resentme nt against the partition of Bengal
		1906	Calcutta	Dadabhai Naoroji	The word 'Swaraj'

			was mentioned for the first time
1907	Surat	Rash Behari Ghosh	Party splits into extremists and moderates
1908	Madras	Rash Behari Ghosh	Previous session continued
1909	Lahore	Madan Mohan Malaviya	Indian Councils Act, 1909
1910	Allahabad	Sir William Wedderburn	–
1911	Calcutta	Bishan Narayan Dhar	'Jana Gana Mana' sung for

			the first time
1912	Bankipore (Patna)	Raghunath Narasinha Mudholkar	–
1913	Karachi	Syed Mohammed	–
1914	Madras	Bhupendra Nath Basu	–
1915	Bombay	Satyendra Prasanna Sinha	–
1916	Lucknow	Ambica Charan Mazumdar	Lucknow Pact – joint session with the Muslim

			League
1917	Calcutta	Annie Besant (1847 – 1933)	First woman president of the INC
1918	Bombay And Delhi	Syed Hasan Imam (Bombay) And Madan Mohan Malaviya (Delhi)	Two sessions were held. First in Bombay in August/S eptember Second in Delhi in December
1919	Amritsar	Motilal Nehru	Jallianwal a Bagh massacre strongly condemne d
1920	Nagpur	C Vijayarag havachari	–

		ar	
1921	Ahmedabad	Hakim Ajmal Khan (acting President For C R Das)	–
1922	Gaya	C R Das	–
1923	Kakinada	Maulana Mohammad Ali,	–
1924	Belgaum	M K Gandhi	–
1925	Kanpur	Sarojini Naidu (1879 – 1949)	First Indian woman president
1926	Guwahati	S Srinivasa Iyengar	–

		1927	Madras	M A Ansari	–
		1928	Calcutta	Motilal Nehru	All India Youth Congress formed
		1929	Lahore	Jawaharlal Nehru	Resolution for 'Poorna Swaraj.' Civil Disobedience movement for complete independence to be launched, 26 January to be observed as 'Independence Day'.

		1930	No Session	–	–
		1931	Karachi	Vallabhbhai Patel	Resolution on fundamental rights and national economic progress. Gandhi-Irwin pact endorsed. Gandhi nominated to represent INC in the second round table conference
		1932	Delhi	Amrit Ranchhorddas Seth	–

	1933	Calcutta	Malaviya Was Elected But Mrs Nellie Sengupta Presided	–
	1934	Bombay	Rajendra Prasad	–
	1937	Lucknow	Jawaharl al Nehru	–
	1936	Faizpur	Jawaharl al Nehru	First rural session/fi rst session to be held in a village
	1938	Haripura	Subhas Chandra Bose	National planning committe e set up under Nehru

	1939	Tripuri	Subhas Chandra Bose	Bose was elected but had to resign since Gandhi supported Pattabhi Sitaramaya. Instead, Rajendra Prasad was appointed
	1940	Ramgarh	Abul Kalam Azad	-
	1941-45	-	-	No session because of arrest
	1946	Meerut	Acharya Kripalani	Last session before independ

			ence
1948	Jaipur	Pattabhi Sitaramaya	First session after independence
1950	Nashik	Purushottam Das Tandon	Resigned in 1951; Nehru became President
1951	Delhi	Jawaharlal Nehru	–
1953	Hyderabad	Jawaharlal Nehru	–
1954	Kalyani	Jawaharlal Nehru	–
1955	Avadi(madras)	U. N. Dhebar	–
1956	Amritsar	U. N.	–

		Dhebar	
1958	Gauhati	U. N. Dhebar	–
1959	Nagpur	Indira Gandhi	–
1960	Bangalore	Neelam Sanjeeva Reddy	–
1961	Bhavnagar	Neelam Sanjeeva Reddy	–
1962	Bhubaneswar	Damodar an Sanjvayya	–
1963	Patna	Damodar an Sanjvayya	–
1964	Bhubaneswar	K. Kamaraj	–

		1965	Durgapur	K. Kamaraj	-
139.	d	<p>The Aravalli Range is one of India's oldest ranges of Fold Mountains. The Aravalli Hills extend for about 670 km in a south-westerly direction, beginning close to Delhi, via southern Haryana, Rajasthan, and terminating in Ahmedabad, Gujarat. Natural resources flourish in the Aravalli Range, which also acts as a barrier to the western desert's expansion.</p> <p>At present, the Aravalli Range has receded to a residual hill range due to degradation. The Sambhar Sirohi Range and the Sambhar Khetri Range in Rajasthan are the two primary ranges that make up the Aravalli Range. This page will cover a variety of topics related to the Aravalli Range, such as its importance and significance, along with the recent developments, and Supreme Court Judgements.</p>			
140.	a	<ul style="list-style-type: none"> ● Atmospheric rivers are relatively long, narrow regions in the atmosphere – like rivers in the sky – that transport most of the water vapor outside of the tropics. <ul style="list-style-type: none"> ○ One well-known atmospheric river called the “Pineapple Express” picks up warm, moist air near Hawaii. ○ When the Pineapple Express hits land in the Western United States and Canada, it can cause heavy rain and snow. In California, it can cause up to 5 inches of rain in a day. ● Atmospheric rivers typically occur in the extratropical North Pacific/Atlantic, southeastern Pacific, and South Atlantic oceans often making landfall on the west coasts of North and South America. Other regions that experience atmospheric river landfalls include Greenland, Antarctica, and the south-central United States. 			

141.	c	<ul style="list-style-type: none">• A geomagnetic storm refers to the disruptions to the Earth's magnetic field caused by solar emissions.• When a Coronal Mass Ejection (CME) or a high-speed solar stream reaches our planet, it slams into the magnetosphere.<ul style="list-style-type: none">○ The Earth's magnetosphere is created by its magnetic fields and it usually protects us from the particles emitted by the Sun.• When a CME or a high-speed stream arrives at Earth, it peels open the planet's magnetosphere, kind of like an onion. This allows energetic solar wind particles to stream down and hit our atmosphere over the poles.• Solar weather events like this can also supercharge auroras, sometimes making them visible in places where they wouldn't have been otherwise.
142.	c	<ul style="list-style-type: none">• Earth Hour is the World Wildlife Fund for Nature (WWF)'s annual initiative that began in 2007. It encourages people from more than 180 countries to switch off the lights from 8.30 pm to 9.30 pm as per their local time. The idea is to refrain from the use of non-essential lighting to save energy in a symbolic call for environmental protection.• Theme: Invest in Our Planet.• Significance:<ul style="list-style-type: none">○ Earth Hour aims to increase awareness and spark global conversations on protecting nature, tackling the climate crisis, and working together to shape a brighter future for humans.○ The symbolic lights-out Earth Hour has become the world's largest grassroots movement to raise awareness about climate change and energy conservation and to assure a sustainable, brighter future.

143.	a	<p>Rubber Plantations in India</p> <ul style="list-style-type: none"> ● Natural rubber is a polymer made up of a chemical molecule called isoprene. ● It is a native of the Amazon basin which was introduced to countries in the tropical belts of Asia and Africa in the late nineteenth century. ● Climatic conditions required for Rubber <ul style="list-style-type: none"> ○ Rainfall: It requires moist and humid climates with heavy rainfall of more than 200 cm. ○ Temperature: It grows well in equatorial climates and temperatures above 25 degrees Celsius. ○ Soil: Well-drained, weathered soils. ● India is the world's largest producer and the third-largest user of natural rubber. ● Rubber Growing Areas in India <ul style="list-style-type: none"> ○ Traditional Areas: Primarily in Tamil Nadu's Kanyakumari District and Kerala. ○ Non-traditional regions: Coastal Karnataka, Goa, Maharashtra's Konkan Region, coastal Andhra Pradesh and Orissa, the northeastern provinces, and the Andaman and Nicobar Islands, among other places.
144.	a	<p>Gauhati HC Directs Forest Dept to File Report on Amchang Wildlife Sanctuary's Border Issue</p> <p>Amchang Wildlife Sanctuary:</p> <ul style="list-style-type: none"> ● The Amchang Wildlife sanctuary is located on the eastern fringe of Guwahati, ● It comprises three Reserve forests-Khanapara, Amchang, and South Amchang.

		<ul style="list-style-type: none"> • It stretches from the Brahmaputra River in the north to the hilly forests of Meghalaya in the south, forming a continuous forest belt through Meghalaya's Maradakdola Reserve Forests. • Flora: Khasi Hill Sal Forests, East Himalayan Mixed Deciduous Forest, Eastern Alluvial Secondary Semi-evergreen Forests and East Himalayan Sal Forests. • Fauna: Flying fox, Slow loris, Assamese macaque, Rhesus macaque, Hoolock gibbon, Porcupine. White-backed Vulture, Slender-billed Vulture. • Tree yellow butterflies (gancana harina) are found at the Amchang wildlife sanctuary which is indigenous to Thailand, Malaysia, Singapore and northeast India
145.	a	<p>Spitsbergen Island</p> <ul style="list-style-type: none"> • It is the largest island in the Svalbard archipelago, • It is the only permanently inhabited part of Svalbard.
146.	a	<p>Chambal River is a tributary of the Yamuna River in central India, and thus forms part of the greater Gangetic drainage system. The river flows north-northeast through Madhya Pradesh, running for a time through Rajasthan, then forming the boundary between Rajasthan and Madhya Pradesh before turning southeast to join the Yamuna in Uttar Pradesh state.</p> <p>The tributaries of Chambal include Kunnu, Parvati, Kalisindh.</p>
147.	a	<p>Plant genetic engineering methods were developed over 30 years ago, and since then, genetically modified (GM) crops or transgenic crops have become commercially available and widely adopted in many countries.</p> <p>The first-generation GM crops have improved traits like Herbicide-resistant crops (soybeans and maize), Pest resistance (Cotton and corn). Second-generation GM crops involve enhanced quality traits, such as higher nutrient content.</p>

		<p>“Golden Rice,” one of the very first GM crops, is biofortified to address vitamin A deficiency. Other biofortification projects include corn, sorghum, cassava, and banana plants, with enhanced minerals and vitamins. Crops can also be modified to ward off plant viruses or fungi.</p>
148.	c	<p>Body mass index (BMI) is a value derived from the mass (weight) and height of a person. The BMI is defined as the body mass divided by the square of the body height, and is expressed in units of kg/m², resulting from mass in kilograms and height in metres. BMI takes into account natural variations in body shape, giving a healthy weight range for a particular height.</p> <p>By basic mathematics, you can derive the height of a person from his BMI if weight is given. For this, the person’s age is not required.</p> <p>A person’s micro-nutritional status and body fat cannot be determined through BMI.</p>
149.	d	<p>UN Habitat released the World Cities Report 2022.</p> <p>World Cities Report 2022: Envisaging the Future of Cities seeks to provide greater clarity and insights into the future of cities based on existing trends, challenges and opportunities, as well as disruptive conditions, including the valuable lessons from the COVID-19 pandemic, and suggest ways that cities can be better prepared to address a wide range of shocks and transition to sustainable urban futures.</p>
150.	b	<p>The WTO has not defined ‘developed’ and ‘developing’ countries and therefore member countries are free to announce whether they are ‘developed’ or ‘developing’.</p> <p>It is WTO’s duty to review and propagate the national trade policies and to ensure the coherence and transparency of trade policies through surveillance in global economic policy-making. Another priority of the WTO is the assistance of developing, least-developed and low-income countries in transition to adjust to WTO rules and disciplines through technical cooperation and training.</p>