

Q1. 'Donetsk and Luhansk' are the two areas that together make up the 'Donbas region' on the border of which of the following countries?

- (a) China – Pakistan
- (b) Ukraine – Russia
- (c) Israel – Palestine
- (d) Bangladesh – Myanmar

L1Difficulty 3

QTags Geography

QCreator Abhinn Sharma

Q2. In which one of the following States is Shendurney Wildlife Sanctuary located?

- (a) UP
- (b) Karnataka
- (c) Andhra Pradesh
- (d) Kerala

L1Difficulty 2

QTags Geography

QCreator Abhinn Sharma

Q3. Which of the statements given is/are correct?

1. Russia borders both Black Sea and Caspian Sea.
  2. Georgia borders only Caspian Sea.
- (a) Only 1
  - (b) 2 only
  - (c) Both 1 and 2
  - (d) Neither 1 nor 2

L1Difficulty 3

QTags Geography

QCreator Abhinn Sharma

Q4. The deflection of radio waves occurs in which of the following layers of the atmosphere?

- (a) Exosphere
- (b) Stratosphere
- (c) Mesosphere
- (d) Ionosphere

L1Difficulty 2

QTags Geography

QCreator Abhinn Sharma

Q5. Choose which of the following National parks are part of Nilgiri Biosphere Reserve?

- 1. Mukurthi National Park
- 2. Bandipur National Park
- 3. Silent Valley National Park
- 4. Eravikulam National Park

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

L1Difficulty 3

QTags Geography

QCreator Abhinn Sharma

Q6. The Kiel canal connects which of the following sea?

- (a) Caribbean sea and Pacific Ocean
- (b) Bering sea and Chukchi sea

- (c) Red sea and Mediterranean sea
- (d) Baltic sea and North sea

L1Difficulty 3

QTags Geography

QCreator Abhinn Sharma

- Q7. Foehn is called the local wind of ?
- (a) China
  - (b) Japan
  - (c) Korea
  - (d) Switzerland

L1Difficulty 2

QTags Geography

QCreator Abhinn Sharma

- Q8. Which of the statements given is/are correct?
1. The Hasdeo Aranya forests are called the lungs of Odisha.
  2. The Hasdeo river is a tributary of the Mahanadi river which originates in Chhattisgarh and flows through Odisha into the Bay of Bengal.
- (a) 1 only
  - (b) 2 only
  - (c) Both 1 and 2
  - (d) Neither 1 nor 2

L1Difficulty 3

QTags Geography

QCreator Abhinn Sharma

Q9. Which of the statements given is/are correct?

1. Most of the world's coral reefs are in tropical waters.
2. More than one-third of the world's coral reefs are located in the territories of Australia, Indonesia and Philippines.
3. Coral reefs host far more number of animal phyla than those hosted by tropical rainforests.

(a) 1 and 2 only

(b) only 3

(c) 1 and 3 only

(d) All 1, 2 and 3

L1Difficulty 3

QTags Geography

QCreator Abhinn Sharma

Q10. Which of the given above pairs is/are correct?

	Places in news	Country
1.	City of Bam	Azerbaijan
2.	Xinjiang	China
3.	City of Budapest	Austria

(a) 1 and 2 only

(b) 2 only

(c) 2 and 3 only

(d) 1 and 3 only

L1Difficulty 3

QTags Geography

QCreator Abhinn Sharma

Q11. Name the Soil having high content of aluminum and iron oxide.

- (a) meadow soil
- (b) pedalfer soil
- (c) chernozen soil
- (d) podzol soil

L1Difficulty 2

QTags Geography

QCreator Abhinn Sharma

Q12. Which of the statements given is/are correct?

1. Sandfish is naturally found in India only.
2. Asiatic lion is naturally found in India only.
3. One-horned rhinoceros is naturally found in India only.

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

L1Difficulty 3

QTags Geography

QCreator Abhinn Sharma

Q13. What is called the speedy cold winds blowing from the Uruguay side in the Pampas region of Argentina?

- (a) Levant
- (b) Pampero
- (c) Harmattan
- (d) Karaburan

L1Difficulty 3

QTags Geography

QCreator Abhinn Sharma

Q14. In which of the following contexts do some scientists suggest the use of cirrus cloud thinning technique and the injection of sulphate aerosol into stratosphere?

- (a) Creating the artificial rains in some regions
- (b) Reducing the frequency and intensity of tropical cyclones
- (c) Reducing the adverse effects of solar wind on the Earth
- (d) Reducing the global warming

L1Difficulty 2

QTags Geography

QCreator Abhinn Sharma

Q15. On which river is the World famous Kaieteur Falls situated?

- (a) Potaro
- (b) Mississippi
- (c) St. Lawrence
- (d) Zambezi

L1Difficulty 3

QTags Geography

QCreator Abhinn Sharma

Q16. Across which of the following river is The Farakka Barrage built?

- (a) Brahmaputra
- (b) Ganga
- (c) Teesta
- (d) Feni

L1Difficulty 2

QTags Geography

QCreator Abhinn Sharma

Q17. Consider the following statements with reference to agricultural soils, Which of the statements given is/are correct?

1. A high content of organic matter in soil drastically reduces its water holding capacity.
2. Soil does not play any role in the sulphur cycle.
3. Irrigation over a period of time can contribute to the salinization of some agricultural lands.

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

L1Difficulty 3

QTags Geography

QCreator Abhinn Sharma

Q18. Look at the following pairs:

- |    | Tributary river | Main River     |
|----|-----------------|----------------|
| 1. | Dhauliganga     | Yamuna River   |
| 2. | Banas           | Chambal River  |
| 3. | Indravati       | Godavari River |

Which of the above pairs is/are correctly matched?

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

L1Difficulty 3

QTags Geography

QCreator Abhinn Sharma

Q19. Which of the statements given is/are correct?

1. India is the second largest tobacco producer behind Brazil.
  2. The Tobacco Board is a statutory body.
- (a) 1 only
- (b) 2 only
- (c) Both of the above
- (d) Neither 1 nor 2

L1Difficulty 3

QTags Geography

QCreator Abhinn Sharma

Q20. Which of the following is/are 'rain cloud'?

1. Cirrus
  2. Nimbostratus
  3. Cumulonimbus
  4. Altocumulus
- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 3 and 4 only
- (d) 1 and 4 only

L1Difficulty 3

QTags Geography

QCreator Abhinn Sharma

Q21. Which of the statements given is/are correct?

1. Constitution of India vests the superintendence, direction and control of the conduct of election to the office of the Vice-President of India in the Secretary General of the Rajya Sabha.
  2. As per Article 66 of the Constitution of India, the Vice-President is elected by the members of the Electoral College.
- (a) 1 only



- (b) 2 only
- (c) Both of the above
- (d) Neither 1 nor 2

L1Difficulty 3

QTags Indian Polity

QCreator Abhinn Sharma

Q22. Which of the statements given is/are correct?

1. Vice-President is a member and chairman of Council of States.
2. Vice-President can be removed only through a formal impeachment process similar to that of President.
3. Dr S. Radhakrishnan served as the 2nd President of India.

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

L1Difficulty 3

QTags Indian Polity

QCreator Abhinn Sharma

Q23. Which of the following statements is not correct regarding Money Bill?

- (a) A bill shall be deemed to be money bill if it contains only provisions related to imposition, abolition, remission, alteration or regulation of any tax.
- (b) A Money Bill has provisions only for the custody of the Consolidated Fund of India or the Contingency Fund of India.
- (c) A Money Bill is concerned with appropriation of moneys out of the Contingency Fund of India.
- (d) A Money Bill deals only with the regulation of borrowing of money or giving of any guarantee by the government of India.

L1Difficulty 3

QTags Indian Polity

QCreator Abhinn Sharma

Q24. Which of the statements given is/are correct?

1. Speaker of the legislative assembly shall vacate his/her office if he/she ceases to be a member of the assembly
  2. Whenever the legislative assembly is dissolved the speaker shall vacate his/her office immediately
- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) None of the above

L1Difficulty 2

QTags Indian Polity

QCreator Abhinn Sharma

Q25. Which of the following statements is/are correct Regarding Parliamentary Committees?

1. Committees which are appointed or elected by the House or nominated by the Speaker
  2. Committees which work under the direction of the Speaker and present their reports to the House or to the Speaker and the Secretariat
  3. Committees which are established by the Prime Minister as per the exigencies of the time and needs of the situation
- (a) 1 only
- (b) 1 and 2 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

L1Difficulty 3

QTags Indian Polity

QCreator Abhinn Sharma

Q26. Consider the following statements related to the constitution of India Which of the statements given is/are correct?

1. In India, a person cannot be prosecuted more than once for the same offence.
  2. Article 21 of the Constitution guarantees the right against double jeopardy.
- (a) 1 only  
(b) 2 only  
(c) Both 1 and 2  
(d) Neither 1 nor 2

L1Difficulty 3

QTags Indian Polity

QCreator Abhinn Sharma

Q27. Which of the statements given is/are correct?

1. Economic Advisory Council to the Prime Minister (EAC-PM) is an independent body constituted to give advice on economic and related issues to the Government of India, specifically to the Prime Minister.
  2. The Cabinet Secretary is the ex-officio Chairman of the Economic Advisory Council to the Prime Minister (EAC-PM).
- (a) 1 only  
(b) 2 only  
(c) Both 1 and 2  
(d) Neither 1 nor 2

L1Difficulty 3

QTags Indian Polity

QCreator Abhinn Sharma

Q28. Article 44 of the Indian Constitution "Uniform civil code for the citizens" is related to \_\_\_\_\_.

- (a) the directive principles of state policy
- (b) the Union Government
- (c) the State Government
- (d) the fundamental rights of the Indian Citizen

L1Difficulty 2

QTags Indian Polity

QCreator Abhinn Sharma

Q29. What is the Call sign of any aircraft carrying the Indian President is -

- (a) Air India One
- (b) Air Force one
- (c) Code Eagle
- (d) Flight 101

L1Difficulty 3

QTags Indian Polity

QCreator Abhinn Sharma

Q30. Read the following statements carefully regarding Uniform Civil Code. Which of the statements given is/are correct?

1. A Uniform Civil Code is one that would provide for one law for the entire country, applicable to all religious communities in their personal matters such as marriage, divorce, inheritance and adoption.
2. Article 44 of the Constitution lays down that it shall be the obligation of the state to secure a Uniform Civil Code for the citizens throughout the territory of India.

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

L1Difficulty 3

QTags Indian Polity

QCreator Abhinn Sharma

Q31. By which of the following an amendment of the constitution may be initiated ?

- (a) By introduction by the President of India.
- (b) By introduction of a Bill in Rajya Sabha.
- (c) By the Governors of States.
- (d) By the introduction of a bill in either House of Parliament.

L1Difficulty 2

QTags Indian Polity

QCreator Abhinn Sharma

Q32. Which Article of Indian Constitution deals with the Right to Equality before Law?

- (a) Article - 13
- (b) Article -14
- (c) Article - 15
- (d) Article – 17

L1Difficulty 3

QTags Indian Polity

QCreator Abhinn Sharma

Q33. Right to Health (including mental healthcare) in India is included in which of the following?

- (a) Fundamental Right
- (b) Constitutional Right
- (c) Statutory Right
- (d) Natural Right

L1Difficulty 3

QTags Indian Polity

QCreator Abhinn Sharma

Q34. "Trade unions" is listed in which list in the Seventh Schedule of the Constitution of India.

- (a) Union
- (b) State
- (c) Global
- (d) Concurrent

L1Difficulty 3

QTags Indian Polity

QCreator Abhinn Sharma

Q35. Name the writ which is issued by a higher court (High Court or Supreme Court) when a lower court has considered a case going beyond its jurisdiction.

- (a) Habeas Corpus
- (c) Mandamus
- (c) Prohibition
- (d) Quo Warranto

L1Difficulty 3

QTags Indian Polity

QCreator Abhinn Sharma

Q36. Consider the following statements with reference to 'Agenda 21', Which of the statements given is/are correct?

1. It is a global action plan for sustainable development.
2. It originated in the World Summit on Sustainable Development held in Johannesburg in 2002.

- (a) 1 only

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

L1Difficulty 3

QTags Environment

QCreator Abhinn Sharma

Q37. 'Greenhouse Gas Protocol' is?

- (a) It is an international accounting tool for government and business leaders to understand, quantify and manage greenhouse gas emissions
- (b) It is an initiative of the United Nations to offer financial incentives to developing countries to reduce greenhouse gas emissions and to adopt eco-friendly technologies
- (c) It is an inter-governmental agreement ratified by all the member countries of the United Nations to reduce greenhouse gas emissions to specified levels by the year 2022
- (d) It is one of the multilateral REDD+ initiatives hosted by the World Bank

L1Difficulty 3

QTags Environment

QCreator Abhinn Sharma

Q38. Consider the following animals of India:

1. Crocodile

2. Elephant

Which of these is/are endangered species?

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

L1Difficulty 3

QTags Environment

QCreator Abhinn Sharma

Q39. With reference to UN (United Nations) Ocean Conference 2022, Which of the statements given is/are correct?

1. The conference was co-hosted by the Governments of Norway and Sweden.
2. Minister of Earth Sciences led the Indian delegation at UN Ocean Conference.
3. The conference ended with Lisbon Declaration titled 'Our Ocean, Our Future: call for action'.

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

L1Difficulty 3

QTags Environment

QCreator Abhinn Sharma

Q40. Ashoka called the Third Buddhist Council at?

- (a) Pataliputra
- (b) Magadha
- (c) Kalinga
- (d) Sarnath

L1Difficulty 2

QTags Indian History

QCreator Abhinn Sharma

Q41. The main historical source regarding the information about Self-government under the Cholas is the?

- (a) Halmidi inscription
- (b) Jatwai inscription
- (c) Uttaramerur inscription



(d) Chandravallu inscription

L1Difficulty 2

QTags Indian History

QCreator Abhinn Sharma

Q42. The most commonly used coin during the Mauryan period was

(a) Karashapana

(b) Nishka

(c) Suvarna

(d) Kakini

L1Difficulty 3

QTags Indian History

QCreator Abhinn Sharma

Q43. The reverential title of 'The Liberator' had been earned by

(a) Alexander

(b) Chandragupta Maurya

(c) Ashoka

(d) Chandragupta Vikramaditya

L1Difficulty 3

QTags Indian History

QCreator Abhinn Sharma

Q44. With reference to the religious history of India, Which of the statements given is/are correct?

1. The concept of Bodhisattva is central to Hinayana sect of Buddhism.

2. Bodhisattva is a compassionate one on his way to enlightenment.
3. Bodhisattva delays achieving his own salvation to help all sentient beings on their path to it.
- (a) 1 only
  - (b) 2 and 3 only
  - (c) 2 only
  - (d) 1, 2 and 3

L1Difficulty 3

QTags Indian History

QCreator Abhinn Sharma

Q45. Which of the following dynasties was not located in South India?

- (a) Hoysala
- (b) Pandya
- (c) Kadamba
- (d) Kalchuri

L1Difficulty 3

QTags Indian History

QCreator Abhinn Sharma

Q46. Alauddin Khilji's first military operation was against which of the following?

- (a) Bijapur
- (b) Ranthambore
- (c) Devagiri
- (d) Chittaur

L1Difficulty 2

QTags Indian History

QCreator Abhinn Sharma

Q47. Which of the following land revenue arrangement is called 'Todarmal System'?

- (a) Zabti System
- (b) Galla Bakshi System
- (c) Kankut System
- (d) Nasaq System

L1Difficulty 3

QTags Indian History

QCreator Abhinn Sharma

Q48. With reference to the cultural history of India, Which of the statements given is/are correct?

1. White marble was used in Mughal Buland Darwaza and Khankah at Fatehpur Sikri.
  2. Red sandstone and marble were used in making Bara Imambara and Rumi Darwaza at Lucknow.
- (a) 1 only
  - (b) 2 only
  - (c) Both 1 and 2
  - (d) Neither 1 nor 2

L1Difficulty 3

QTags Indian History

QCreator Abhinn Sharma

Q49. With reference to the religious history of India, Which of the statements given is/are correct?

1. Sthaviravadins belong to mahayana Buddhism

2. Lokottaravadin sect was an offshoot of Mahasanghika sect of Buddhism
  3. The deification of Buddha by Mahasanghikas fostered the mahayana Buddhism.
- (a) 1 and 2 only
  - (b) 2 and 3 only
  - (c) 3 only
  - (d) 1, 2 and 3 only

L1Difficulty 3

QTags Indian History

QCreator Abhinn Sharma

Q50. Which of the following events is NOT considered for the time being of Viceroy Lord Lytton?

- (a) Second Afghan War
- (b) Burma war
- (c) Arms Act
- (d) Press Act

L1Difficulty 3

QTags Indian History

QCreator Abhinn Sharma

Q51. Which of the following pairs is not correctly matched?

- (a) Munda Rebellion : 1899
- (b) Vellore Mutiny: 1806
- (c) Santhal Rebellion: 1855
- (d) Chuar Rebellion: 1870

L1Difficulty 2

QTags Indian History

QCreator Abhinn Sharma

Q52. Who said the following “the only lesson required in India at present is to learn how to die and the only way to teach is by dying ourselves. Therefore, I die and glory in my martyrdom”?

- (a) AurbindoGhosh
- (b) Khudiram Bose
- (c) Chandra Shekhar Azad
- (d) Madan Lal Dhingra

L1Difficulty 3

QTags Indian History

QCreator Abhinn Sharma

Q53. With reference to the ancient history of India, the terms “Kurinji, Mullai, Marutham, Neithal and Paalai” refers to

- (a) places of exquisite stone art and architecture
- (b) landscapes of Sangam Age
- (c) ports handling foreign trade
- (d) important Buddhist pilgrimage centres

L1Difficulty 3

QTags Indian History

QCreator Abhinn Sharma

Q54. Which one of the following chronological orders of the given event is correct?

- (a) The Civil Disobedience Movement-The Cripps Mission-The Cabinet Mission’s Plan
- (b) The Cripps Mission-The Civil Disobedience Movement-The Cabinet Mission’s Plan
- (c) The Cripps Mission-The Cabinet Mission’s Plan-The Civil Disobedience Movement
- (d) The Civil Disobedience Movement-The Cabinet Mission’s Plan-The Cripps Mission

L1Difficulty 3

QTags Indian History

QCreator Abhinn Sharma

Q55. Who is the author of the book 'Arctic Home of the Vedas'?

- (a) Gopal Krishna Gokhale
- (b) Lala Bal Pal
- (c) Bipin Chandra Pal
- (d) Bal Gangadhar Tilak

L1Difficulty 3

QTags Indian History

QCreator Abhinn Sharma

Q56. Consider the following statements with reference to cultural history of India, Which of the statements given are correct?

1. Most of the Tyagaraja Kritis are devotional songs in praise of Lord Krishna.
2. Tyagaraja created several new ragas.
3. Annamacharya and Tyagaraja are contemporaries.
4. Annamacharyaldrtanas are devotional songs in praise of Lord Venkateshwara.

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

L1Difficulty 3

QTags Art & Culture

QCreator Abhinn Sharma

Q57. Recently, which one of the following Indian Dance nominated in UNESCO Heritage List?

- (a) Bhangra
- (b) Dhamal
- (c) Bagurumba
- (d) Garba

L1Difficulty 3

QTags Art & Culture

QCreator Abhinn Sharma

Q58. Choose which of the following pairs is not correctly matched?

- (a) Idu Mishmi Textiles: Arunachal Pradesh
- (b) Kandangi Saree: Tamil Nadu
- (c) Makhana : Odisha
- (d) Kinnauri shawl: Himachal Pradesh

L1Difficulty 2

QTags Art & Culture

QCreator Abhinn Sharma

Q59. With reference to Ashadhi Bij, Which of the statements given is/are correct?

1. Kutchi community of Gujarat celebrates their new year on this day.
2. The festival is associated with the beginning of rains in the Kutch region of Gujarat.

- (a) 1 only
- (b) 2 only
- (c) Both of the above
- (d) None of the above

L1Difficulty 3

QTags Art & Culture

QCreator Abhinn Sharma

Q60. Look at the following pairs:

	Toys/Handicrafts	State
1.	Etikoppaka bommalu	Andhra Pradesh
2.	Choppu saman	Odisha
3.	Ghuggu and Handwai	Punjab

Which of the given pairs is/are correctly matched?

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

L1Difficulty 3

QTags Art & Culture

QCreator Abhinn Sharma

Q61. Read the given statements given with reference to Electoral Bonds Which of the statements given is/are correct?

- 1. An electoral bond is like a promissory note that can be bought by any Indian citizen or company incorporated in India.
- 2. The electoral bonds are available for purchase for 10 days in the beginning of every year.
- 3. The electoral bonds will not bear the name of the donor.

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

L1Difficulty 3



QTags Economy

QCreator Abhinn Sharma

Q62. Read the following statements about 'Banks Board Bureau (BBB)', Which of the statements given is/are correct?

1. It was part of the Indradhanush Plan.
  2. The Governor of RBI is the Chairman of BBB.
- (a) 1 only  
(b) 2 only  
(c) Both 1 and 2  
(d) Neither of the above

L1Difficulty 3

QTags Economy

QCreator Abhinn Sharma

Q63. Which was the first modern industry to develop in India?

- (a) Iron and Steel Industry  
(b) Cement Industry  
(c) Cottage Industry  
(d) Engineering Industry

L1Difficulty 3

QTags Economy

QCreator Abhinn Sharma

Q64. Financial Stability Report (FSR) is released by

- (a) Reserve Bank of India (RBI)  
(b) Bank for International Settlements (BIS)  
(c) NITI Aayog  
(d) World Health Organisation

L1Difficulty 3

QTags Economy

QCreator Abhinn Sharma

Q65. Among the following Acts, an Enforcement Directorate (ED) in India will be most concerned with

- (a) Preventive Instrument Act
- (b) Public Debt Act
- (c) Prevention of Money Laundering Act
- (d) Narcotic Drugs and Psychotropic Substances Act

L1Difficulty 2

QTags Economy

QCreator Abhinn Sharma

Q66. Goods for which the quantity that a consumer chooses, increases as the consumer's income increases and decreases as the income decreases are called?

- (a) Inferior goods
- (b) Normal goods
- (c) Complementary goods
- (d) Substitute goods

L1Difficulty 2

QTags Economy

QCreator Abhinn Sharma

Q67. In the context of any country, which one of the following would be considered as part of its social capital?

- (a) The proportion of literates in the population
- (b) The stock of its buildings, other infrastructure and machines

- (c) The size of population in the working age group
- (d) The level of mutual trust and harmony in the society

L1Difficulty 3

QTags Economy

QCreator Abhinn Sharma

Q68. Which of the statements given is/are correct?

1. The GST Council is India's first experience at a cooperative-federalism based decision-making authority.
2. The 122nd constitution amendment bill and all legislations enabling the GST were passed unanimously by the Parliament.

- (a) Only 1
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither of the above

L1Difficulty 3

QTags Economy

QCreator Abhinn Sharma

Q69. Read the following statements carefully regarding the Minimum Support Price (MSP) system in India, Which of the statements given is/are correct?

1. The MSP is the rate at which the government purchases crops from farmers.
2. It is based on a calculation of at least one-and-a-half times the cost of production incurred by the farmers.
3. The MSP is fixed thrice a year on the recommendations of the Commission for Agricultural Costs and Prices (CACP).

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

(d) 1, 2 and 3

L1Difficulty 3

QTags Economy

QCreator Abhinn Sharma

Q70. Fiscal policy in India is formulated by -

(a) Reserve Bank of India

(b) Planning Commission

(c) Finance Ministry

(d) SEBI

L1Difficulty 3

QTags Economy

QCreator Abhinn Sharma

Q71. A genetically engineered form of brinjal known as the BT-brinjal has been developed. The objective of this is -

(a) to make it pest resistant

(b) to improve its taste and nutritive value

(c) to make it drought resistant

(d) to make its shelf life longer

L1Difficulty 3

QTags Biology

QCreator Abhinn Sharma

Q72. Hematopoiesis take place in \_\_\_\_\_.

(a) Lungs

(b) Pancreas

(c) Liver

(d) Bone marrow

L1Difficulty 3

QTags Biology

QCreator Abhinn Sharma

Q73. Which lobe of human brain is associated with hearing?

(a) Frontal lobe

(b) Parietal lobe

(c) Temporal lobe

(d) Occipital lobe

L1Difficulty 3

QTags Biology

QCreator Abhinn Sharma

Q74. Azolla increases soil fertility for -

(a) Maize cultivation

(b) Wheat cultivation

(c) Barley cultivation

(d) Rice cultivation

L1Difficulty 3

QTags Biology

QCreator Abhinn Sharma

Q75. *Emblica officinalis* is the scientific name of -

(a) Peepal

(b) Mango

(c) Amla

(d) Drumstick

L1Difficulty 3

QTags Biology

QCreator Abhinn Sharma

Q76. Which non-flowering, spore bearing plants have roots?

(a) Mosses

(b) Angiosperms

(c) Ferns

(d) Gymnosperms

L1Difficulty 3

QTags Biology

QCreator Abhinn Sharma

Q77. What does Trypsin do?

(a) Breaks down Carbohydrates

(b) Synthesizes proteins

(c) Breaks down fats

(d) Breaks down proteins

L1Difficulty 3

QTags Biology

QCreator Abhinn Sharma

Q78. With reference to the work of human kidney, consider the following statements

1. After the waste is removed in the kidney, the clean blood is sent back through renal artery.
2. From Bowman's capsule, the filtered liquid passes through tiny tubes where much of the glucose is reabsorbed and sent back to the blood in the renal vein.

Which of these statements is/are correct?

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

L1Difficulty 3

QTags Biology

QCreator Abhinn Sharma

Q79. The auxiliary buds \_\_\_\_\_.

- (a) grow endogenously from the pericycle
- (b) arise endogenously from the main growing point
- (c) is an embryonic shoot located in the axil of a leaf
- (d) arise exogenously from the epidermis

L1Difficulty 2

QTags Biology

QCreator Abhinn Sharma

Q80. Intestinal bacteria synthesizes which of the following in the human body?

- (a) Vitamin K
- (b) Proteins
- (c) Fats
- (d) Vitamin D

L1Difficulty 2

QTags Biology

QCreator Abhinn Sharma

Q81. Which of the following is a Synthetic rubber?

- (a) Leoprene
- (b) Monoprene

(c) Neoprene

(d) Isoprene

L1Difficulty 3

QTags Chemistry

QCreator Abhinn Sharma

Q82. The conversion of hard water into soft water by boiling or adding calcium hydroxide is called \_\_\_\_\_.

(a) Baker's process

(b) Temp's process

(c) Clarke's process

(d) Lake's process

L1Difficulty 3

QTags Chemistry

QCreator Abhinn Sharma

Q83. Concentration of water vapour in troposphere is -

(a) 0-4%

(b) 10-14%

(c) 20-24%

(d) 30-34%

L1Difficulty 3

QTags Chemistry

QCreator Abhinn Sharma

Q84. Adding which substance gives blue colour to glass?

(a) Manganese oxide



- (b) Cobalt oxide
- (c) Chromium oxide
- (d) Iron oxide

L1Difficulty 3

QTags Chemistry

QCreator Abhinn Sharma

Q85. Which one of the following pairs is correctly matched?

- (a) Silver Iodide - Horn Silver
- (b) Silver Chloride - Artificial rain
- (c) Zinc Phosphide - Rat poison
- (d) Zinc Sulphide - Philosopher's wool

L1Difficulty 3

QTags Chemistry

QCreator Abhinn Sharma

Q86. Match List-I with List-II and select the correct answer using the codes given below the lists:

List-I	List-II
(Naturally occurring substance)	(Element present)
A. Diamond	1. Calcium
B. Marble	2. Silicon
C. Sand	3. Aluminium
D. Ruby	4. Carbon

Code:

- |     |   |   |   |   |
|-----|---|---|---|---|
|     | A | B | C | D |
| (a) | 3 | 1 | 2 | 4 |

(b) 4 2 1 3

(c) 2 1 3 4

(d) 4 1 2 3

L1Difficulty 3

QTags Chemistry

QCreator Abhinn Sharma

Q87. Which one of the following pairs is not correctly matched?

- (a) Dry ice : Solid carbon dioxide
- (b) Mustard gas : Poisonous liquid used in chemical warfare
- (c) Teflon : Polymer containing fluorine
- (d) Fullerene : Organic compounds containing fluorine

L1Difficulty 3

QTags Chemistry

QCreator Abhinn Sharma

Q88. Gasohol is a mixture of:

- (a) Gasoline and Butanol
- (b) Gasoline and Ethanol
- (c) Gasoline and Propanol
- (d) Methanol and Ethanol

L1Difficulty 2

QTags Chemistry

QCreator Abhinn Sharma

Q89. Consider the following statements with reference to chemical fertilizers in India, Which of the statements given is/are correct?

1. At present, the retail price of chemical fertilizers is market-driven and not administered by the Government.
  2. Ammonia, which is an input of urea, is produced from natural gas.
  3. Sulphur, which is a raw material for phosphoric acid fertilizer, is a by-product of all oil refineries.
- (a) 3 only
- (b) 2 and 3 only
- (c) 2 only
- (d) 1, 2 and 3

L1Difficulty 3

QTags Chemistry

QCreator Abhinn Sharma

- Q90. Which one of the following can be used to confirm whether drinking water contains a gamma emitting isotope or not ?
- (a) Microscope
  - (b) Lead plate
  - (c) Scintillation counter
  - (d) Spectrophotometer

L1Difficulty 3

QTags Chemistry

QCreator Abhinn Sharma

- Q91. A body of mass 4 kg accelerates from 15 m/s to 25 m/s in 5 seconds due to the application of a force on it. Calculate the magnitude of this force (in N).
- (a) 32
  - (b) 8
  - (c) 16
  - (d) 64

Q92. The impression of an image persists on the retina for about \_\_\_\_\_ of a second.

(a) 1/10th

(b) 1/8th

(c) 1/16th

(d) 1/5th

L1Difficulty 3

QTags Physics

QCreator Abhinn Sharma

Q93. What is the resistance (in  $\Omega$ ) of an electrical component if a current of 0.1 A passes through it on application of 5 V of potential difference across it?

(a) 0.5

(b) 100

(c) 50

(d) 1

Q94. Which of the statements given is/are correct?

1. Coal ash contains arsenic, cadmium and mercury.

2. Coal fired power plants release sulphur dioxide and oxides of nitrogen into the environment.

3. High ash content is observed in Indian Coal.

(a) 1 only

(b) 2 and 3 only

(c) 3 only

(d) 1, 2 and 3

L1Difficulty 3

QTags Physics

QCreator Abhinn Sharma

Q95. Why does ice covered in sawdust not melt quickly?

- (a) Sawdust does not allow the air to touch the ice
- (b) The water is absorbed by sawdust
- (c) Sawdust is a bad conductor of heat
- (d) Sawdust is good conductor of heat

L1Difficulty 2

QTags Physics

QCreator Abhinn Sharma

Q96. Which of the statements given is/are correct?

1. The muon is one of the fundamental subatomic particles.
2. Muons are similar to proton but weigh more than 207 times as much.
3. Muons are by-products of cosmic rays colliding with molecules in the upper atmosphere.

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

L1Difficulty 3

QTags Physics

QCreator Abhinn Sharma

Q97. Which of the above is/are the prediction/predictions of Albert Einstein's General Theory of Relativity, often discussed in media?

1. Light is affected by gravity.
  2. The Universe is constantly expanding.
  3. Matter warps its surrounding space-time.
- (a) 1 and 2 only

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

L1Difficulty 3

QTags Physics

QCreator Abhinn Sharma

Q98. Assertion (A) : With the increase of temperature, the viscosity of glycerin increases.

Reason (R) : Rise of temperature increases kinetic energy of molecules.

Code:

- (a) Both (A) and (R) are true, and (R) is the correct explanation of (A).
- (b) Both (A) and (R) are true, but (R) is not the correct explanation of (A).
- (c) (A) is true, but (R) is false.
- (d) (A) is false, but (R) is true.

L1Difficulty 3

QTags Physics

QCreator Abhinn Sharma

Q99. Which of the statements given is/are correct?

1. Hydrogen in its pure form is the most abundant element available on Earth.
2. Since Hydrogen has higher energy density than that of diesel, it makes it a rich source of energy.

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

L1Difficulty 3

QTags Physics

QCreator Abhinn Sharma

Q100. Electric motors operating at low voltages tend to burn out because-

- (a) They draw more current which is inversely proportional to the voltage.
- (b) They draw more current which is inversely proportional to the square root of the voltage.
- (c) They draw heat proportional to  $V^2$ .
- (d) Low voltage sets in electrical discharge.

L1Difficulty 3

QTags Physics

QCreator Abhinn Sharma

Q101. Which of the statements given is/are correct?

1. World Cities Day is an annual United Nations observance day held on 31 October.
2. The global observance, first held in 2014, is organized by the United Nations Educational, Scientific and Cultural Organization in coordination with each year's selected host city.

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

Q102. 'NCORD and NIDAAN' portals have been launched with the objective of

- (a) Urban development
- (b) Traffic management
- (c) Waste management
- (d) Drug-free India

L1Difficulty 3

QTags Current Affairs

QCreator Abhinn Sharma

Q103. Which of the is/are the key feature(s) of India's Drone Rules 2021?

1. No permission required for operating drones in green zones.
2. No restriction on foreign ownership in Indian drone companies.
3. Coverage of drones increased from 300 kg to 500 kg.

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

L1Difficulty 3

QTags Current Affairs

QCreator Abhinn Sharma

Q104. Which of the statements given is/are correct?

1. Bonalu is an annual festival that is celebrated in the state of Telangana.
2. It is celebrated in the month of Ashad.

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

Q105. Which one of the following is the best description of 'Vikram-S', that was in the news recently?

- (a) Amphibious warfare ship
- (b) Nuclear-powered submarine



- (c) Torpedo launch and recovery vessel
- (d) India's first privately developed space launch vehicle

Q106. Which institution released the 'Commodity Markets Outlook report for October 2022'?

- (a) IMF
- (b) World Bank
- (c) World Economic Forum
- (d) Reserve Bank of India

L1Difficulty 3

QTags Current Affairs

QCreator Abhinn Sharma

Q107. 'Garuda VII' is a bilateral exercise conducted by the Air Force of India and which country?

- (a) China
- (b) France
- (c) Japan
- (d) Australia

L1Difficulty 3

QTags Current Affairs

QCreator Abhinn Sharma

Q108. Which city is the host of the 'India Space Congress, ISC 2022'?

- (a) Kolkata
- (b) Mumbai
- (c) New Delhi
- (d) Hyderabad

L1Difficulty 2

QTags Current Affairs

QCreator Abhinn Sharma

Q109. Which country co-chaired the High-Level Dialogue on Migration and Mobility (HLDMM ), with the European Union?

- (a) India
- (b) Australia
- (c) Italy
- (d) China

L1Difficulty 2

QTags Current Affairs

QCreator Abhinn Sharma

Q110. Which state announced to form 'State Transformation Commission' to replace state planning commission?

- (a) Haryana
- (b) Uttar Pradesh
- (c) Odisha
- (d) Punjab

L1Difficulty 2

QTags Current Affairs

QCreator Abhinn Sharma

Q111. Recently, which one of the following has conducted India's First Floating Financial Literacy Camp with an initiative called 'Niveshak Didi' to promote Financial Literacy in India?

- (a) RBI
- (b) NITI
- (c) SEBI
- (d) IPPB

Q112. The third Vande Bharat Express train, which was recently inaugurated (in October 2022), runs between which cities?

- (a) Mumbai and Gurugram
- (b) Mumbai and Ahmedabad
- (c) Bengaluru and Mysuru
- (d) Mumbai and Indore

L1Difficulty 3

QTags Current Affairs

QCreator Abhinn Sharma

Q113. Which state/UT launched a 15-point 'Winter Action Plan' to curb air pollution?

- (a) Himachal Pradesh
- (b) New Delhi
- (c) Rajasthan
- (d) Haryana

L1Difficulty 3

QTags Current Affairs

QCreator Abhinn Sharma

Q114. Bannerman's Turaco (Fen), which was seen in the news, belongs to which species?

- (a) Fish
- (b) Bird
- (c) Snake
- (d) Turtle

L1Difficulty 3

QTags Current Affairs

QCreator Abhinn Sharma

Q115. What is "Hellfire R9X", sometimes seen in the news?

- (a) An Indian radar system
- (b) India's indigenous anti-missile programme
- (c) An American 'kinetic kill' missile system

(d) A defence collaboration between Japan and South Korea

L1Difficulty 2

QTags Current Affairs

QCreator Abhinn Sharma

Q116. Indian Air Force (IAF) conducted the Exercise Vayu Shakti which held in every three year had been placed this year at which of the place?

- (a) Pokhran, Rajasthan
- (b) Dehradun, Uttarkhand
- (c) Jaisalmer, Rajasthan
- (d) Chennai, Tamil Nadu

L1Difficulty 3

QTags Science & Tech & Computer

QCreator Abhinn Sharma

Q117. With reference to the Indian Regional Navigation Satellite System (IRNSS), Which of the statements given is/are correct?

1. IRNSS has three Satellites in geostationary and four satellites the geosynchronous orbits.
2. IRNSS covers entire India and about 5500 sq. km beyond its borders.

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) None of the above

L1Difficulty 3

QTags Science & Tech & Computer

QCreator Abhinn Sharma

Q118. The Nobel Prize for Physics 2022 is being shared by three scientists, for their work in which field?

- (a) Nuclear Physics
- (b) Quantum mechanics
- (c) Atomic science
- (d) Astro Science

L1Difficulty 3

QTags Science & Tech & Computer

QCreator Abhinn Sharma

Q119. 'Droni', a made-in-India camera drone, was recently launched by which institution?

- (a) IMA
- (b) DRDO
- (c) Garuda Aerospace
- (d) Pixel Aerospace

L1Difficulty 3

QTags Science & Tech & Computer

QCreator Abhinn Sharma

Q120. Consider the following statements regarding GSLV Mk-III. Launch Vehicle Mark 3 (LVM3) mission is associated with which country?

- (a) Australia
- (b) India
- (c) China
- (d) Israel

L1Difficulty 2

QTags Science & Tech & Computer

QCreator Abhinn Sharma

Solutions

S1. Ans.(b)

Sol. Donetsk and Luhansk are the two areas that together make up the Donbas region on the Ukraine-Russia border. Donbas is a key industrial hub and important from a resource perspective having the largest coal reserves in Ukraine. These two areas broke away from the Ukrainian government's control back in 2014 and proclaimed themselves independent "people's republics". Donbas region also offers strategic advantages for Russia. By controlling the region, Russia intends to create a 'land bridge' to Crimea, a territory it annexed in 2014.

Access to the Black Sea and warm water ports in Crimea such as Sevastopol allows it to access important trade routes throughout the year.

S2. Ans.(d)

Sol. Saving Chenkuri from climate change. The Shendurney Wildlife Sanctuary derives its name from *Gluta travancorica*, a species endemic to the Agasthyamala Biosphere Reserve known as 'Chenkuri' in local parlance.

Shendurney Wildlife Sanctuary is a protected area in the Western Ghats, India, located in Kollam district of Kerala and comes under the control of Agasthyamalai Biosphere Reserve.

S3. Ans.(a)



S4. Ans.(d)

Sol. Ionosphere is the top layer of the atmosphere. Radio waves are deflected in the ionosphere of the atmosphere. Ionosphere is composed of D, E and F layers. D layer (60 km from earth) is good at absorbing AM radio waves.

S5. Ans. (a)

Sol. The Nilgiri Biosphere Reserve is an International Biosphere Reserve in the Western Ghats and Nilgiri Hills ranges of South India. The Nilgiri Sub-Cluster is a part of the Western Ghats, which was declared a World Heritage Site by

UNESCO in 2012. It includes the Aralam, Mudumalai, Mukurthi, Nagarhole, Bandipur and Silent Valley national parks, as well as the Wayanad and Sathyamangalam wildlife sanctuaries.

S6. Ans. (d)

Sol. The Kiel canal connects Baltic sea and North sea. The Kiel Canal, known as the Kaiser-Wilhelm Kanal until 1948, is a 98-kilometre long canal in the German state of Schleswig-Holstein. The canal links the North Sea at Brunsbüttel to the Baltic Sea at Kiel-Holtenau.

S7. Ans.(d)

Sol. Foehn is a local wind of Switzerland. A foehn is a type of dry, warm, down-slope wind that occurs in the lee (downwind side) of a mountain range. It is a rain shadow wind that results from the subsequent adiabatic warming of air that has dropped most of its moisture on windward slopes (see orographic lift).

S8. Ans.(b)

Sol. The Hasdeo Aranya forests are called the lungs of Chhattisgarh.

The Hasdeo river is a tributary of the Mahanadi river which originates in Chhattisgarh and flows through Odisha into the Bay of Bengal.

S9. Ans.(d)

Sol. S1 and S2: The vast majority of large reefs created by corals in shallow waters (< 50 m water depth) are located within a tropical zone located between 30° N and 30° S latitude with a preferred temperature range of approximately 22° to 29° C. Coral reefs are often called the “tropical rainforests of the sea” for their astounding richness of life.

S3: Coral reefs are the most diverse communities on the planet. These tropical marine communities occupy less than 1% of the ocean floor, but are inhabited by at least 25% of all

marine species. Scientists estimate that more than 25,000 described species from thirty-two of the world's thirty-three animal phyla live in reef habitats – four times the number of animal phyla found in tropical rain forests.

S10. Ans.(b)

Sol. From Australia's Great Barrier Reef to the city of Budapest [ Hungary's capital, is bisected by the River Danube] and the watery wonderland that is Venice, several beauty spots risk losing their treasured UN World Heritage status because of environmental damage, excess development or overtourism. Bam, city in eastern Kermān province, Iran.

S11. Ans.(b)

Sol. Pedalfer is composed of high amount of aluminum and iron oxides. It is a subdivision of the zonal soil order comprising a large group of soils in which sesquioxides increase relative to silica during soil formation. Pedalfers usually occur in humid areas.

S12. Ans.(b)

Sol. S1: Sandfish are migratory freshwater fish found only in South Africa that can grow to over half a metre in length. They help to keep the rivers clean and the food web balanced.

S2: The Asiatic lion's range is restricted to the Gir National Park and environs in the Indian state of Gujarat.

S3: The one-horned rhinoceros is native to the Indian subcontinent (not only India). The Indian rhinoceros once ranged throughout the entire stretch of the Indo-Gangetic Plain, but excessive hunting and agricultural development reduced their range drastically to 11 sites in northern India and southern Nepal.

S13. Ans.(b)

Sol. The Pampero is a burst of cold polar air from the west, southwest or south on the pampas in the south of Brazil, Argentina, Uruguay, Paraguay and Bolivia.

S14. Ans.(d)



Sol. The ability of stratospheric sulfate aerosols to create a global dimming effect has made them a possible candidate for use in solar radiation management climate engineering projects to limit the effect and impact of climate change due to rising levels of greenhouse gases. Delivery of precursor sulfide gases such as sulfuric acid, hydrogen sulfide (H<sub>2</sub>S) or sulfur dioxide (SO<sub>2</sub>) by artillery, aircraft and balloons has been proposed.

Cirrus cloud thinning is a proposed form of climate engineering. Cirrus clouds are high cold ice that, like other clouds, both reflect sunlight and absorb warming infrared radiation. However, they differ from other types of clouds in that, on average, infrared absorption outweighs sunlight reflection, resulting in a net warming effect on the climate. Therefore, thinning or removing these clouds would reduce their heat trapping capacity, resulting in a cooling effect on Earth's climate.

S15. Ans.(a)

Sol. Kaieteur Falls is the world's largest single drop waterfall by the volume of water flowing over it. Located on the Potaro River in the Kaieteur National Park.

S16. Ans.(b)

Sol. It is an agreement to share surface waters at the Farakka Barrage (on the river Ganga) near the mutual border between India and Bangladesh.

S17. Ans.(b)

Sol. S1: Soil water holding capacity is the amount of water that a given soil can hold for crop use. Soil texture and organic matter are the key components that determine soil water holding capacity. Organic matter influences the physical conditions of a soil in several ways. Plant residues that cover the soil surface protect the soil from sealing and crusting by raindrop impact, thereby enhancing rainwater infiltration and reducing runoff. Each 1 percent increase in soil organic matter helps soil hold 20,000 gallons more water per acre.

S2: Sulphur is one of three nutrients that are cycled between the soil, plant matter and the atmosphere. The sulphur cycle describes the movement of sulphur through the atmosphere, mineral and organic forms, and through living things. Although sulphur is primarily found in sedimentary rocks, it is particularly important to living things because it is a component of many proteins

S3: Salinization is a major problem associated with irrigation, because deposits of salts build up in the soil and can reach levels that are harmful to crops. Hence statement 3 is correct

S18. Ans.(b)

Sol. 444-MW VPHEP is being built by the Tehri Hydropower Development

Corporation (THDC) (on river Alaknanda (a tributary of river Ganga)) o The project is primarily funded by the World Bank and was sanctioned in 2011.

It is proposed to be completed in June 2023.

S1: The Dhauliganga is a turbulent Himalayan river which rises in the border regions of India and China and flows south into the Garhwal region of Uttarakhand, India. It joins the Alaknanda, the major source stream of the Ganges river.

S2: The Banas is a river which lies entirely within the state of Rajasthan in western India. It is a tributary of the Chambal River, itself a tributary of the Yamuna, which in turn merges into the Ganga.

S3: Indravati River is a tributary of the Godavari River, in central India.

S19. Ans.(b)

Sol. Andhra Pradesh government exported tobacco to the USA for 1st time in the country

- Status: India is the 2nd largest producer (1st is China) and 2nd largest export (1st in Brazil) of tobacco.
- Nodal Agency: Tobacco Board (Ministry of Commerce and Industry) o The Tobacco Board was constituted as a statutory body on 1st January, 1976 under Section (4) of the Tobacco Board Act, 1975.

S20. Ans.(b)

Sol. Two types of cloud which are Nimbostratus and Cumulonimbus are mainly rain bearing clouds.

S21. Ans.(b)

Sol. Article 324 of the Constitution read with the Presidential and VicePresidential Elections Act, 1952 and the Presidential and Vice-Presidential Elections Rules, 1974, vests the superintendence, direction and control of the conduct of election to the office of the Vice-President of India in the Election Commission of India. As per Article 66 of the Constitution of India, the Vice-President is elected by the members of the Electoral College.

Electoral College consists of:

- Elected members of Rajya Sabha.
- Nominated members of Rajya Sabha.
- Elected members of Lok Sabha.

S22. Ans.(a)

Sol. Vice-President is not a member, however he/she is the chairman of Council of States. There is no exact procedure mentioned in Indian Constitution for the removal of Vice President. Dr S. Radhakrishnan served as the 2nd President of India.

S23. Ans.(c)

Sol. For the purposes of this Chapter, a Bill shall be deemed to be a Money Bill if it contains only provisions dealing with all or any of the following matters, namely

(a) the imposition, abolition, remission, alteration or regulation of any tax;

(b) the regulation of the borrowing of money or the giving of any guarantee by the Government of India, or the amendment of the law with respect to any financial obligations undertaken or to be undertaken by the Government of India;

(c) the custody of the consolidated Fund or the Contingency Fund of India, the payment of moneys into or the withdrawal of moneys from any such Fund;

(d) the appropriation of moneys out of the consolidated Fund of India (not Contingency Fund of India). So, C is incorrect.

S24. Ans.(a)

Sol. Usually, the speaker remains in office during the life of the assembly. However, he vacates his office earlier in any of the following cases:

o If he ceases to be a member of the assembly o If he resigns by writing to the deputy speaker and;

o If he is removed by a resolution passed by a majority of all the then members of the assembly. Such a resolution can be moved only after giving 14 days advance notice

Statement 2 is incorrect because the Speaker holds office from the date of her election till immediately before the first meeting of the Legislative assembly after the dissolution of the one to which she was elected. She is eligible for re-election. On the dissolution of the Legislative assembly, although the Speaker ceases to be a member of the House, she does not vacate her office.

S25. Ans.(b)

Sol. Parliamentary Committees:

o The Lok Sabha website describes a parliamentary committee as a “committee which is appointed or elected by the House or nominated by the Speaker and which works under the direction of the Speaker and presents its report to the House or to the Speaker and the Secretariat”.

- Cabinet Committees:

The Prime Minister sets up different cabinet committees with selected members of the Cabinet and assigns specific functions to these committees

S26. Ans.(a)

Sol. A person cannot be prosecuted more than once for the same offence.

Article 20(2) of the Constitution guarantees the right against double jeopardy. Multiple FIRs on the same incident would virtually mean multiple trials. Approaching the Supreme Court in such situations is a procedural safeguard against excessive litigation.

Other judgements: In T T Anthony v State of Kerala, a 2001 verdict, the Supreme Court held that there cannot be a “second FIR” on the same issue.

In 2020, the Supreme Court in the case of Arnab Goswami v Union of India expanded this ruling and said that similar FIRs in different jurisdictions also violate fundamental rights.

S27. Ans.(a)

Sol. Economic Advisory Council to the Prime Minister (EAC-PM) is an independent body constituted to give advice on economic and related issues to the Government of India, specifically to the Prime Minister. At present, the composition of EAC-PM is: Dr. Bibek Debroy (Chairman),

Shri Rakesh Mohan (Part-Time Member), Dr. Sajjid Chinoy (Part-Time Member),

Dr. Neelkanth Mishra (Part-Time Member), Shri Nilesh Shah (Part-Time Member), Prof. T.T. Ram Mohan (Part-Time Member) and Dr. Poonam Gupta (Part-Time Member).

The Terms of Reference of EAC-PM include analyzing any issue, economic or otherwise, referred to it by the Prime Minister and advising him thereon, addressing issues of macroeconomic importance and presenting views thereon to the Prime Minister. These could be either suo-motu or on reference from the Prime Minister or anyone else. They also include attending to any other task as may be desired by the Prime Minister from time to time.

S28. Ans.(a)

Sol. Article 44 of the Indian Constitution "Uniform civil code for the citizens" deals with the directive principles of state policy.

S29. Ans.(a)

Sol. Air India One is the call sign of any aircraft with the Prime Minister or President of India on board.

S30. Ans.(a)

Sol. A Uniform Civil Code is one that would provide for one law for the entire country, applicable to all religious communities in their personal matters such as marriage, divorce, inheritance, adoption etc. Article 44 of the Constitution lays down that the state shall endeavour to secure a Uniform Civil Code for the citizens throughout the territory of India.

Article 44 is one of the directive principles. These, as defined in Article 37, are not justiciable (not enforceable by any court) but the principles laid down therein are fundamental in governance. Fundamental rights are enforceable in a court of law. While Article 44 uses the words "state shall endeavour", other Articles in the 'Directive Principles' chapter use words such as "in particular strive"; "shall in particular direct its policy"; "shall be obligation of the state" etc. Article 43 mentions "state shall endeavour by suitable legislation" while the phrase "by suitable legislation" is absent in Article 44. All this implies that the duty of the state is greater in other directive principles than in Article 44.

S31. Ans.(d)

Sol. An amendment of this Constitution may be initiated only by the introduction of a Bill for the purpose in either House of Parliament.

S32. Ans.(b)

Sol. Article-14 states that the State shall not deny to any person equality before the law or the equal protection of the laws within the territory of India Prohibition of discrimination on grounds of religion, race, caste, sex or place of birth.

S33. Ans.(a)

Sol. Constitutional Provision: Right to Health (including mental healthcare) is a fundamental right under Article 21 of the Constitution.

S34. Ans.(d)

Sol. Trade unions is listed in the Concurrent list given in the Seventh Schedule of the Indian Constitution.

S35. Ans.(c)

Sol. Prohibition Writ is issued by a higher court (High Court or Supreme Court) when a lower court has considered a case going beyond its jurisdiction.

S36. Ans.(a)

Sol. Agenda 21 is a non-binding, voluntarily implemented action plan of the United Nations with regard to sustainable development. It is a product of the Earth Summit (UN Conference on Environment and Development) held in Rio de Janeiro, Brazil, in 1992.

S37. Ans.(a)

Sol. The Greenhouse Gas Protocol (GHG Protocol) is the most widely used international accounting tool for government and business leaders to understand, quantify, and manage greenhouse gas emissions.

- It is a decade-long partnership between the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD).
- It is working with businesses, governments, and environmental groups around the world to build a new generation of credible and effective programs for tackling climate change.

S38. Ans.(a)

Sol. Only crocodile is kept in the Red book or endangered species list.

S39. Ans.(b)

Sol. The conference was co-hosted by the Governments of Kenya and Portugal. Minister of Earth Sciences led the Indian delegation at UN Ocean Conference. 2nd UNOC ended with Lisbon Declaration titled 'Our Ocean, Our Future: call for action'.

S40. Ans.(a)

Sol. Third Buddhist council was held in 250 BC at Pataliputra under the patronage of King Asoka and under the presidency of Moggaliputta Tissa. The teachings of Buddha which were under two baskets were now classified in 3 baskets as Abhidhamma Pitaka was established in this council, and they were known as "Tripitaka". It also tried to settle all the disputes of Vinaya Pitaka.

S41. Ans.(c)

Sol. The temple inscriptions of Uthiramerur are notable for their historical descriptions of the rural self-governance. They indicate that Uthiramerur had two village assemblies: Sabha and Ur. Chola administration is famous for its local government.

Sapta Sindhu play a prominent part in the hymns of the Rigveda, and consequently in early Vedic religion.

S42. Ans.(a)

Sol. Karashapana is one of the coins which is widely used during mauryan period.

S43. Ans.(b)

Sol. Chandragupta Maurya (reign: 321–298 BCE) was the founder of the Maurya Empire in ancient India. Chandragupta built one of the largest empires ever in the Indian subcontinent. According to Jain sources, he became a monk in the Jain tradition in the last phase of his life and earned the title of 'The Liberator'.

S44. Ans.(b)

Sol. Statement 1: It is central to the Mahayana sect of Buddhism.

- In non-Mahayana Buddhism, it usually refers either to Maitreya, the Buddha of the Future, or to the historical Buddha Gautama prior to his enlightenment.
- Statement 2 and 3: A bodhisattva is literally a living being (sattva) who aspires to enlightenment (bodhi) and carries out altruistic practices. The bodhisattva ideal is central to the Mahayana Buddhist tradition as the individual who seeks enlightenment both for him- or herself and for others. Clearly 2 is correct.
- Compassion, an empathetic sharing of the sufferings of others, is the bodhisattva's greatest characteristic.
- It is held that the bodhisattva makes four vows expressing a determination to work for the happiness of others: "However innumerable sentient beings are, I vow to save them; however inexhaustible the passions are, I vow to master them; however limitless the teachings are, I vow to study them; however infinite the Buddha-truth is, I vow to attain it."
- Clearly 3 is correct.

S45. Ans.(d)

Sol. The Kalachuris were an Indian dynasty that ruled in west-central India between 6th and 7th centuries. They are also known as the Haihayas or as the "early Kalachuris" to distinguish them from their later namesakes.

S46. Ans.(b)

Sol. Alauddin conquered the kingdoms of Gujarat (raided in 1299 and annexed in 1304), Ranthambore (1301), Chittor (1303), Malwa (1305), Siwana (1308), and Jalore (1311). These victories ended several Hindu dynasties, including the Paramaras, the Vaghelas.

S47. Ans.(a)

Sol. In 1580, Akbar instituted a new system called the Dahsala or the Bandobast Arazi or the Zabti system. The credit for developing this system goes to Raja Todarmal.

S48. Ans.(b)

Sol. S1: The Buland Darwaza is made of red and buff sandstone, decorated by white and black marble and is higher than the courtyard of the mosque. The Buland Darwaza is symmetrical and is topped by large free standing kiosks, which are the chhatris.

S2: The architectural style of the Rumi Darwaza is completely in sync with the

Nawabi architecture of Lucknow, and its significantly different from the Mughals. The material used for the drawaza is bricks and its then coated with lime, while the Mughals often used red sand stone. This is why the detailing on the Darwaza is more intricate, which would be impossible to achieve in stone.

Red sandstone and marble were used in making Bara Imambara and Rumi Darwaza at Lucknow.

S49. Ans.(b)

Sol. • S1: They were Theravadins.

• S2: The Mahāsāṃghikas school was first located in the area of Vaiśālī and spread also to southern India, with centres at Amarāvātī and Nāgārjunakoṇḍa. Its texts were written in Prākṛit. It further divided into several subsects, of which the best known was the Lokottaravāda (so called because of its views on lokottara).



- The Lokottaravāda was one of the early Buddhist schools according to Mahayana doxological sources compiled by Bhāviveka, Vinitadeva and others
- S3: The Mahāsaṅghikas believed in a plurality of buddhas who are supramundane (lokottara) and held that what passed for Gautama Buddha in his earthly existence was only an apparition.

S50. Ans.(b)

Sol. Lord Lytton remained the Viceroy of India from 1876-1880. Second Afghan war- 1878-80, Vernacular Press Act-1878 and Arms act- 1878 were important features of the Lord Lytton viceroyalty.

S51. Ans.(d)

Sol. Chuar Rebellion occurred in 1798-99 in Bankura / Midnapore districts of modern West Bengal. Munda rebellion took place in the region south of Ranchi in 1899-1900. Santhal Revolt took place in 1855. The Vellore mutiny on 10 July 1806 was the first instance of a large-scale and violent mutiny by Indian sepoys against the East India Company. The Santhal revolt (also known as the Hul revolt ) started on 30th June 1855

S52. Ans.(d)

Sol. Madan Lal Dhingra said that. He was an Indian revolutionary independence activist. He assassinated Sir William Hutt Curzon Wylie, a British official, cited as one of the first acts of revolution in the Indian independence movement in the 20th century.

S53. Ans.(b)

Sol. T.N. sends soil samples for a project relating to the new Parliament building o They pertain to the 5 ecological regions mentioned in ancient Tamil Sangam literature.

Soil samples from five ecological regions mentioned in ancient Tamil Sangam literature — Kurinji, Mullai, Marutham, Neithal and Paalai — have been collected and sent to the capital recently.

S54. Ans.(a)

Sol. The Civil Disobedience Movement-1930

The Cripps Mission-1942

The Cabinet Mission's Plan-1946

S55. Ans.(d)

Sol. The Arctic Home in the Vedas is a 1903 book on the origin of the Indo-Aryan peoples by Indian nationalist, teacher and independence activist Bal Gangadhar Tilak.

S56. Ans.(b)

Sol. Statement 1: Tallapāka Annamācārya (or Annamayya) was a 15th-century Hindu saint and is the earliest known Indian musician to compose songs called sankirtanas in praise of the god Venkateswara, a form of Vishnu. Hence S1 is incorrect.

- Statement 2: Tyagaraja took music training from Sonti Venkataramayya. But that didn't stop him from taking musical inspirations from various earlier poets. He was an ardent devotee of lord Rama. In his praise and honour he wrote numerous musical operas, and about twenty four thousand songs, a claim that has been speculated among music historians. Hence, S2 is correct.

- Statement 3: Tyagaraja was born on 14th May 1767 in the village of Thiruvayaru in the Thanjavur district of Tamil Nadu whereas Tallapāka Annamācārya (or Annamayya) (22 May 1408 – 4 April 1503) was a 15th-century Hindu saint. Hence, statement 3 is incorrect.

- Statement 4: Tallapāka Annamācārya (or Annamayya) (22 May 1408 – 4 April 1503) was a 15th-century Hindu saint and is the earliest known Indian musician to compose songs called sankirtanas in praise of the god Venkateswara, a form of Vishnu. Hence, S4 is correct.

S57. Ans.(d)

Sol. Garba is a form of dance, as well as a religious and social event that originated in Gujarat. If approved for the list, it will become the first intangible cultural heritage of Gujarat to be listed by UNESCO.

S58. Ans.(c)

Sol. • Himachal Pradesh: Kinnauri shawl

- Kandangi Saree: Tamil Nadu
- Idu Mishmi Textiles: Arunachal Pradesh
- Makhana: Bihar

S59. Ans.(c)

Sol. Kutchi community of Gujarat celebrates their new year on this day.

Ashadhi Bij falls on the second day of Shukla paksha of Ashada month of the Hindu calendar.

- The festival is associated with the beginning of rains in the Kutch region of Gujarat.
- During Ashadhi Bij, the moisture in the atmosphere is checked to predict which crop would do best in the coming monsoon

S60. Ans.(b)

Sol. Etikoppaka bommalu (Andhra):

Traditional shapes of the toys include a farmer with nagali, a bridal set, veena, sannai melam, a spread of traditional wedding sweets and more.

- Choppu saman (TN): These wooden toy sets of miniature kitchen utensils come in different sizes and shapes, polished at the edges and painted bright.

Chankana, Ghuggu and Handwai (Punjab)

S61. Ans.(a)

Sol. S1 and S2 : Electoral Bond is a financial instrument for making donations to political parties. The bonds are available for purchase by any person (who is a citizen of India or incorporated or established in India) for a period of ten days each in the months of January, April, July and October as may be specified by the Central Government.

- The bonds are issued in multiples of Rs. 1,000, Rs. 10,000, Rs. 1 lakh, Rs. 10 lakh and Rs. 1 crore without any maximum limit.
- State Bank of India is authorised to issue and encash these bonds, which are valid for fifteen days from the date of issuance.

S62. Ans.(a)

Sol. About BBB:

It was set up in February 2016 as an autonomous body– based on the recommendations of the RBI-appointed Nayak Committee. It was part of the Indradhanush Plan.

It will make recommendations for the appointment of whole-time directors as well as non-executive chairpersons of Public Sector Banks (PSBs) and state owned financial institutions. The Ministry of Finance takes the final decision on the appointments in consultation with the Prime Minister's Office.

S2: The Chairman is selected by the central government and the RBI governor does not head it.

S63. Ans.(a)

Sol. Iron and Steel Industry was the first modern industry to develop in India.

S64. Ans.(a)

Sol. Reserve Bank of India (RBI) released its bi-annual Financial Stability Report (FSR)

S65. Ans.(c)

Sol. Enforcement Directorate (ED) is a law enforcement agency and economic intelligence agency responsible for enforcing economic laws and fighting economic crime in India. It is part of the Department of Revenue, Ministry of Finance.

The prime objective of the Enforcement Directorate is the enforcement of two key Acts- the Foreign Exchange Management Act 1999 (FEMA) and the Prevention of Money Laundering Act 2002 (PMLA).

S66. Ans.(b)

Sol. In economics, normal goods are any goods for which demand increases when income increases, and falls when income decreases but price remains constant, i.e. with a positive income elasticity of demand.

S67. Ans.(d)

Sol. Option A and D are examples of human capital and option B is physical capital.

“Social capital broadly refers to those factors of effectively functioning social groups that include such things as interpersonal relationships, a shared sense of identity, a shared understanding, shared norms, shared values, trust, cooperation, and reciprocity.” Option D is the correct answer.

S68. Ans.(c)

Sol. To develop a consensus, we passed the Constitution amendment enabling the GST unanimously. All legislations enabling the GST were passed unanimously. The rules were put before the GST Council. They have been approved unanimously. We have held 27 meetings of the GST Council so far where every decision has been taken by consensus and unanimity. All the rates are fixed through consensus on the recommendation of the Rates Committee. Whenever there are contrarian views in the Council, a representative Group of Ministers of the State is constituted to work out a *via media* and we try to evolve consensus one way or the other. I do realise that the delicate federal balance in India has to be maintained. The GST Council is India's first experience at cooperative federalism based decision-making authority. We cannot afford to risk a failure and, therefore, it is functioning as to arouse confidence amongst all States. The meetings have always been consensus based. The only area where unanimity seems to be lacking is the television bites that some Ministers' give after the meeting, which may be necessary for their own political position. I am willing to live with the experience of a healthy debate and unanimity within the Council and a show of dissent outside the Council meetings.

S69. Ans.(a)

Sol. The MSP is the rate at which the government purchases crops from farmers, and is based on a calculation of at least one-and-a-half times the cost of production incurred by the farmers.

The Union Budget for 2018-19 had announced that MSP would be kept at levels of 1.5 the cost of production.

The MSP is fixed twice a year on the recommendations of the Commission for Agricultural Costs and Prices (CACP), which is a statutory body and submits separate reports recommending prices for kharif and rabi seasons.

S70. Ans.(c)

Sol. Fiscal policy in India is formulated by Finance Ministry.

S71. Ans.(a)

Sol. A genetically engineered form of brinjal known as the BT-brinjal has been developed. The objective of this is to make it pest resistant. It is created by inserting a crystal protein gene from the soil bacterium *Bacillus thuringiensis* into the genome of various brinjal cultivars.

S72. Ans.(d)

Sol. Haematopoiesis refers to the commitment and differentiation processes that lead to the formation of all blood cells from haematopoietic stem cells. In adults, haematopoiesis occurs mainly in the bone marrow.

S73. Ans.(c)

Sol. Temporal lobe of human brain is associated with hearing and are related to smell, taste and short- term memory.

S74. Ans.(d)

Sol. Azolla is an efficient Nitrogen fixer. The use of Bio-fertilizers like Azolla not only increases the rice productivity but also improves the long term soil fertility.

S75. Ans.(c)

Sol. *Phyllanthus emblica* is scientific name of amla it is a deciduous tree of the family Phyllanthaceae.

S76. Ans.(c)

Sol. Ferns are non-flowering, deciduous or evergreen perennial plants that grow in various sizes having roots. The fern's life cycle continues when spores germinate in sunlit, moist environments.

S77. Ans.(d)

Sol. Trypsin is one of the three principal digestive proteinases. Trypsin acts with the other proteinases to break down dietary protein molecules to their component peptides and amino acids.

S78. Ans.(b)

Sol. A nephron consists of a network of tiny blood vessels, the glomerulus surrounded by Bowman's capsule. Pressure forces much of the blood plasma through the glomerulus and into Bowman's capsule. The resulting tubular fluid, which contains water and dissolved chemicals then passes into convoluted tubule and loop of Henle. This capillary network provides a mean for pick up and delivery of materials that are reabsorbed and secreted by the kidney.

S79. Ans.(c)

Sol. The axillary bud is a bud that develops in the axil of a leaf of a plant. Axillary buds develop from the nodes which then becomes a new stem. Sometimes from axillary buds instead of branches (axillary shoot) also arise flowers, these buds are called floral buds.

S80. Ans.(a)

Sol. Vitamin K in majority is synthesized by bacteria in the large intestine. It is necessary for formation of several blood-clotting factors in the liver, and deficiency leads to bleeding disorders.

S81. Ans.(c)

Sol. Neoprene is a family of synthetic rubbers that are produced by polymerization of chloroprene. Neoprene exhibits good chemical stability and maintains flexibility over a wide temperature range

S82. Ans.(c)

Sol. Clark's method is a process for the large-scale removal of temporary hardness from water. Clark's process involves the addition of a controlled quantity of slaked lime .

S83. Ans.(a)

Sol. Water vapor is unique in that its concentration varies from 0-4% of the atmosphere depending on time of day.

S84. Ans.(b)

Sol. Cobalt oxide is added to glass to gave it blue colour.

S85. Ans.(c)

Sol. Pairs is correctly matched as such-

Silver Iodide – Artificial rain, Silver Chloride – Horn Silver, Zinc Phosphide – Rat poison, Zinc Oxide – Philosopher's wool.

S86. Ans.(d)

Sol. Diamond is Allotrope of Carbon . Marble is a metamorphic rock composed mainly of crystalline calcium Carbonate or Calcium Magnesium Carbonate. The most common component of sand is Silicon dioxide in the form of quartz. Ruby is considered as one of the four precious stones together with Sapphire, Emerald and Diamond. In Chemistry, the ruby gemstone is a mixture of Aluminium, Oxygen and Chromium.

S87. Ans.(d)

Sol. Dry Ice – We can simply say that Dry ice is solid Carbon dioxide It is used as a cooling agent.

Mustard gas – It is used as a strong chemical weapon. This mortally chemical affects skin, leering eye, lungs and D.N.A. which affects the cells most.

Teflon – Its commercial name is Polytetra Fluoroethylene. Teflon is a Fluorine containing the polymer.

Fullerene – Fullerene is an allotrope of the carbon family in which fully carbon atoms are integrated.

S88. Ans.(b)

Sol. Gasohol, a gasoline extender made from a mixture of gasoline (90%) and ethanol (10% often obtained by fermenting agricultural crops) or gasoline (97%) and methanol or wood alcohol (3%). Gasohol has higher octane or antiknock properties by which it burns more slowly, coolly and completely.

S89. Ans.(b)

Sol. S1: The Union Government subsidies the urea manufacturing units for the cost of transportation to facilitate the availability of urea at the same maximum retail price all over the country. Also, the Government is subsidising fertilizers for their availability at reasonable prices for agricultural purposes.

S2: Common knowledge.

S3: Sulphur is a by-product of processing natural gas and refining high-sulphur crude oils. Even if they use low sulphur crude oil, there is still sulphur emission, so S3 is correct.

The primary sources of sulfuric acid emissions are combustion of coal, and the industries that manufacture or use it in production, including metal smelters, phosphate fertilizer producers,



oil refineries, the chemical industry, battery manufacturers, manufacturers of fabricated metal products, manufacturers of electronic components, and manufacturers of measuring and controlling devices.

S90. Ans.(c)

Sol. **Scintillation counter (scintillometer)**: An instrument which measures gamma radiation. It is also used in airborne and ground radiometre surveys. This instrument utilizes the flash of light emitted when the atoms of a suitable ' phosphor' are energized by gamma rays. The scintillations are detected by a light - sensitive cathode.

S91. Ans.(b)

Sol. From Newton's first equation of motion,

$$v = u + at$$

$$\text{So, } a = (v - u) / t = (25 - 15) / 5$$

$$a = 2 \text{ m/s}^2$$

Now  $F = ma$

$$= 4 \times 2 = 8 \text{ m/s}^2$$

S92. Ans.(c)

Sol. An image stays on the retina for about 1/16 of a second. This feature is called persistence of vision.

S93. Ans.(c)

Sol. According to Ohm's law,

$$V = IR$$

Where V is voltage, I is the current in the circuit and R is the resistance of an electrical component

$$R = V / I = 5 / 0.1$$

$$= 50.$$

S94. Ans.(d)

Sol. Coal ash contains contaminants like mercury, cadmium and arsenic. Without proper management, these contaminants can pollute waterways, ground water, drinking water, and the air

- Coal and fuel oil combustion emit fly ash particles into the atmosphere, which contribute to air pollution problems. Upon burning, coal produces a number of gaseous byproducts, including carbon dioxide, nitrogen oxide, sulfur dioxide and methane gas, all of which contribute to global climate change.

- Ash content of coal produced from India is generally 25 to 45 % whereas average ash content of imported coal varies from 10 to 20 %. Indian Coal has comparatively higher ash content than imported coal due to drift theory of formation of coal deposits in India.

S95. Ans.(c)

Sol. Saw dust is used to cover ice because it is poor conductor of heat. It did not let the ice melt quickly, as it does not transfer the heat of the surrounding to the ice.

S96. Ans.(b)

Sol. The muon is one of the fundamental subatomic particles, the most basic building blocks of the universe as described in the Standard Model of particle physics.

- Muons are similar to electrons but weigh more than 207 times as much.
- Muons occur naturally when cosmic rays strike Earth's atmosphere, and particle accelerators at Fermilab can produce them in large numbers.

Muons are by-products of cosmic rays colliding with molecules in the upper atmosphere. Muons reach earth with an average velocity of about  $0.994c$ .

S97. Ans.(d)

Sol. S1: Einstein's theory of relativity has important astrophysical implications. For example, it implies the existence of black holes—regions of space in which space and time are distorted in such a way that nothing, not even light, can escape—as an end-state for massive stars.

- The bending of light by gravity can lead to the phenomenon of gravitational lensing, in which multiple images of the same distant astronomical object are visible in the sky. Hence, statement 1 is correct.
- S2: General relativity also predicts the existence of gravitational waves, which have since been observed directly by the physics collaboration LIGO. In addition, general relativity is the basis of current cosmological models of a consistently expanding universe. Hence, statement 2 is correct.
- S3: General relativity is Einstein's law of gravity, his Justification of that fundamental force which holds us to the surface of the Earth. Gravity, Einstein asserted, is caused by warping of space and time or space-time. Hence, statement 3 is correct.

S98. Ans.(d)

Sol. The temperature dependence of liquid (Glycerin etc) viscosity is the phenomenon by which liquid viscosity tends to decrease as its temperature increases. The increase in temperature causes the kinetic or thermal energy to increase and the molecules become more movable.

S99. Ans.(b)

Sol. Hydrogen is the most abundant element on the planet, but rarely in its pure form which is how we need it. It has an energy density almost three times that of diesel. This phenomenon makes it a rich source of energy, but the challenge is to compress or liquify the LH<sub>2</sub> (liquid hydrogen); it needs to be kept at a stable minus 253° C (far below the temperature of minus 163° C at which Liquified Natural Gas (LNG) is stored; entailing its 'prior to use exorbitant cost'.

S100. Ans.(a)

Sol. Electric motors operating at low voltage tend to burn out because they draw more current which is inversely proportional to the voltage.

S101. Ans.(a)

Sol. ● World cities day:

- The United Nations General Assembly designated 31 October as World Cities Day and it was first celebrated in
- Objectives: to promote the international community's interest in global urbanization,
- push forward cooperation among countries in meeting opportunities addressing challenges of urbanization and
- contributing to sustainable urban development around the world.
- Urban October was launched by UN-Habitat in 2014 to emphasize the world's urban challenges and engage the international community towards the New Urban Agenda.
- World Cities Day brings Urban October to an end on 31 October each year.
- UN – Habitat
- The United Nations Human Settlements Programme (UN-Habitat) is the United Nations agency for human settlements and sustainable urban development.
- It was established in 1978 as an outcome of the First UN Conference on Human Settlements and Sustainable Urban Development (Habitat I) held in Vancouver, Canada in 1976.
- It is mandated by the United Nations General Assembly to promote socially and environmentally sustainable towns and cities to provide adequate shelter for all.

- It is a member of the United Nations Development Group.
- UN-Habitat reports to the United Nations General Assembly.
- It has its headquarters in Nairobi, Kenya.

S102. Ans.(d)

Sol. the Union home minister launched NCORD and NIDAAN portals to end the menace of drug trafficking and drug addiction.

S103. Ans.(d)

Sol. All of the above are key features of India's Drone Rules 2021.

S104. Ans.(c)

Sol. ● Context: Rahul Gandhi joins Telangana's traditional Bonalu festival and picked up a heavy rope and whipped himself as he donned the avatar of 'potharaju'.

- It is a traditional Hindu festival centred on the Goddess Mahakali from Telangana.
- Potharaju, a key figure in the Bonalu festival, is the fearsome brother of the goddess Mahankali, who wields a whip to protect the goddess.
- Bonalu involves the worship of the Mother Goddess in regional forms like Maisamma,
- The 'bonalu' festival is celebrated usually during the Hindu calendar month of 'Ashada' that falls in July and August.

S105. Ans.(d)

Sol. Vikram-S, India's first privately developed launch vehicle, is set to take off from the Indian Space Research Organization's (ISRO) launchpad in Sriharikota as part of Mission Parambh (the beginning).

S106. Ans.(b)

Sol. The World Bank has recently released the 'Commodity Markets Outlook report for October 2022'. As per the report, Global energy prices will ease in the next couple of years but remain higher than the historic average.

The report also noted that Energy prices are expected to fall by 11 per cent in 2023 and 12 per cent in 2024.

S107. Ans.(b)

Sol. Indian Air Force (IAF) and French Air and Space Force (FASF) are participating in a bilateral exercise, named 'Garuda VII' at Air Force Station Jodhpur.

In this exercise, the IAF is participating with Su-30 MKI, Rafale, LCA Tejas and Jaguar fighter aircraft, as well as the Light Combat Helicopter (LCH) and Mi-17 helicopters. This is the seventh edition of the bilateral exercise.

S108. Ans.(c)

Sol. The SatCom Industry Association (SIAIndia) has organised a three-day India Space Congress, ISC 2022, in New Delhi.

The theme of ISC 2022 is 'Leveraging Space to Power Next-Gen Communication & Businesses'. Speakers from 30 countries participated in the event, which is supported by the Indian Space Research Organisation (ISRO), Ministry of Defence, Niti Aayog, In-Space, New Space India Ltd (NSIL) and the Department of Telecommunication

S109. Ans.(a)

Sol. India and the European Union co-chaired the 6th High-Level Dialogue on Migration and Mobility (HLDMM) in Brussels.

Talks were held on issues related to the promotion of safe, orderly, and regular migration. The HLDMM was attended by representatives of the Diplomatic Missions of EU Member States in Brussels who were invited as Observers. India and EU celebrate 60 years of diplomatic ties.

S110. Ans.(b)

Sol. Uttar Pradesh cabinet approved a Micro Small Medium Enterprises Promotion Policy (MSME) 2022 and Uttar Pradesh Bioenergy Policy-2022.

The state cabinet also approved a proposal to reorganise the State Planning Commission as the State Transformation Commission (STC) on the pattern of the Niti Aayog. STC would act as a policy think tank to the government as well as perform the work of planning commission.

S111. Ans.(d)

Sol. ● India Post Payments Bank (IPPB), conducted India's First Floating Financial Literacy Camp with an initiative called 'Niveshak Didi' to promote Financial Literacy.

● 'Niveshak Didi' initiative is based on the ideology of women for women as rural area women feel

more comfortable sharing their queries with a female itself.

- The Floating Financial Literacy Camp was conducted among the local residents around the world-famous Dal Lake of Srinagar, J&K.

S112. Ans.(b)

Sol. Prime Minister Narendra Modi inaugurated the Gandhinagar-Mumbai Vande Bharat Express train Mumbai and Ahmedabad, the third in the Vande Bharat series.

The two other Vande Bharat Express trains were introduced in the months of February and October 2019, run from New Delhi to Varanasi and Katra, respectively. The 'Vande Bharat 2.0' Gandhinagar-Mumbai Express train covers a distance of about 540 kilometres in 6 hours 30 minutes.

S113. Ans. (b)

Sol. The Delhi government announced a 15-point 'Winter Action Plan' to curb air pollution in the Capital region.

It would include the installation of 233 anti-smog guns and deployment of at least 150 mobile anti-smog guns. The government is carrying out research in collaboration with IIT-Kanpur to know the amount of pollution and its source at any given point of time.

S114. Ans. (b)

Sol. The Bannerman's Turaco, known in the Oku language as the Fen, is a bird deep cultural value for the people in Cameroon.

It has a heavy yellow bill with a dark red culmen and exposed nostrils. It also has a loud, distinctive call that can be heard up to 1 kilometre. As per experts, the bird, which is already under IUCN List of Threatened Species, could disappear entirely, if forest disappears. The number of birds estimated to be 1,500, are falling due to habitat destruction and tradition of hunting birds for feathers.

S115. Ans. (c)

Sol. Designed to be launched from an unmanned drone (or even a helicopter), the Hellfire R9X is a 'kinetic kill' missile or projectile. It hits the chosen target at a very high velocity. However, instead of an explosive warhead, it deploys six blade-like metal contraptions to kill its target.

S116. Ans. (a)

Sol. Amid the deepening crisis in Ukraine, the Indian Air Force (IAF) has decided to postpone its firepower demonstration, Exercise Vayu Shakti. The exercise was scheduled in the Pokhran ranges in Rajasthan.

S117. Ans.(d)

Sol. Navigation in Indian Constellation (NavIC) is an Indian Regional Navigation Satellite System (IRNSS), developed by the Indian Space Research Organization (ISRO).

- S1: IRNSS consists of eight satellites, three satellites in geostationary orbit and five satellites in geosynchronous orbit. o The main objective is to provide reliable position, navigation and timing services over India and its neighbourhood.
- S2: It is designed to provide accurate position information service to users in India as well as the region extending up to 1500 km from its boundary, which is its primary service area.

S118. Ans.(b)

Sol. The Nobel Prize for Physics 2022 is being shared by three scientists, Alain Aspect, John F Clauser and Anton Zeilinger, for their work on quantum mechanics.

The three scientists conducted a series of experiments on entangled quantum states, where two separate particles behave like a single unit. Their results will have implications in the fields of quantum computers, quantum networks and secure quantum encrypted communication.

S119. Ans.(c)

Sol. Indian cricket star Mahendra Singh Dhoni launched a 'made-in-India camera drone' named 'Droni' with advanced features, during the Global Drone Expo in Chennai.

The drone has been manufactured by Garuda Aerospace, whose brand ambassador is the ace cricketer Dhoni. A new 'Kisan Drone' was also launched, which is aimed at agriculture sector, particularly in spraying applications.

S120. Ans.(b)

Sol. Indian Space Research Organisation's Launch Vehicle Mark 3 (LVM3) mission will launch 36 OneWeb Gen-1 satellites, from the Satish Dhawan Space Centre in Sriharikota.

LVM3 is the dedicated commercial satellite mission of New Space India Limited (NISL), a central public sector enterprise under the Department of Space. This is the first LVM3 dedicated commercial launch on demand through NSIL.