

1. Match List-I with List-II and select the correct answer using the code given below the Lists :

List-I
(Temperate
Grassland)

List-II
(Region)

- | | |
|-------------|-----------------------------|
| A. Prairies | 1. Eurasia |
| B. Steppes | 2. South Africa |
| C. Pampas | 3. North America |
| D. Veldt | 4. South America |

Code :

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

2. Consider the following statements about millets :

1. Millets are often referred to as climate-resilient crops because they can grow on arid lands with minimal inputs and maintenance. ✓
2. Millets are a good source of minerals, dietary fibre, antioxidants and protein.
3. Millets, including (sorghum) account for less than 3% of the global grains trade.

Which of the statements given above are correct ?

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

Directions : The next **three** items are based on a survey on occurrence of vowels in a certain book irrespective of whether they are in upper or lower case.

Vowel	A	E	I	O	U
Percentage	20	45	15	8	12

3. For how many pairs of vowels is the chance of occurrence of any one of the two more than 34% in the book ?

- (a) 4
- (b) 5
- (c) 6
- (d) 7

4. Among the three vowels which occur minimum number of times, what is the percentage of occurrence of the letter that occurs the maximum number of times among them ?

- (a) $42\frac{6}{7}\%$
- (b) $41\frac{5}{7}\%$
- (c) $40\frac{4}{7}\%$
- (d) $39\frac{2}{7}\%$

5. If "O" and "U", irrespective of upper or lower case, occur exactly 5040 times, then how many times does the letter "E" occur in the book in the upper or the lower case ?

- (a) 11840
- (b) 11600
- (c) 11430
- (d) 11340

$$\frac{a+b+c}{3} =$$

6. Suppose a, b and c are three distinct natural numbers such that $a + b + c = abc$.

Consider the following statements :

1. The arithmetic mean of a, b and c is a natural number.
2. The harmonic mean of a, b and c lies between 1 and 2.

Which of the statements given above is/are correct ?

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

7. How many three-digit numbers are possible such that the difference between the original number and the number obtained by reversing the digits is 396? (no digit is repeated)

- (a) 4
- (b) 5
- (c) 50
- (d) 40

8. Which of the following statements is/are correct ?

1. Population ageing is the process by which the share of the older population becomes proportionately lesser.
2. In most of the developed countries, the population in higher age groups has increased.

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

9. Which of the following statements is/are correct about 'Action for Climate Empowerment' (ACE) ?

1. It is a term adopted by the UN Framework Convention on Climate Change.
2. This term is related to the Paris Agreement.

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. What is 'Climate Neutral Now' initiative ?

1. It encourages organizations and other interested stakeholders to act now in order to achieve a carbon neutral world by 2030.
2. It derives its aims from the Paris Agreement.

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 the following statements is/are correct about KAVACH-2023 ?

1. It is a joint coordination committee of all three wings of India's armed forces to protect India's borders.
2. It is India's national level hackathon jointly launched by AICTE and BPRD to tackle cyber threats.

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

12. Which one among the following statements with reference to the 'Neolithic Period' is **not** correct?

- (a) The characteristic features of the period included ground and polished stone tools, agriculture, animal domestication and pottery.
- (b) This period is also known as the 'New Stone Age'.
- (c) The characteristic features appeared almost at the same time in various parts of the subcontinent.
- (d) Earliest evidence of agriculture is found from Mehrgarh around 8000 BCE.

13. Which one of the following is **(not)** a pottery type?

- (a) OCP
- ☒ (b) CCE
- (c) NBP
- (d) BRW

14. Which one of the following political centers finds a mention in Ashokan inscriptions?

- (a) Indraprastha
- (b) Kaushambi
- (c) Suvarnagiri
- (d) Kandahar

15. Which one of the following statements with reference to the ancient Indian coins is **not** correct?

- (a) The Indo-Greeks issued the first coins bearing the name and images of rulers.
- (b) The Kushanas issued the first gold coins.
- (c) The Kushana gold coins were different in weight from the coins issued by contemporary Roman emperors.
- ☒ (d) These Kushana gold coins have been (found from several sites in north India and central Asia.

16. Consider the following statements about the practice of Vedic sacrifices :

1. The shrauta (Vedic sacrifices) involved the use of three fires — the garhapatya (householder's fire), ahavaniya (offeratorial fire) and dakshinagni (southern fire).
2. These fires were supposed to be placed in pits of different shapes, i.e., the garhapatya to be square, ahavaniya to be round and that of the dakshinagni, rectangle-shaped.

Which of the statements given above is/are correct?

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

17. Trans-Siberian Railway from St. Petersburg to Vladivostok does **not** run across :

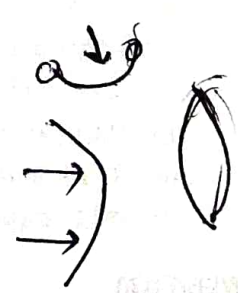
- (a) Altai range
- ☒ (b) Caucasus mountains
- (c) Ural mountains
- (d) Ob and Yenisei rivers

18. Consider the following statements about Barchans :

1. These landforms are found in Thar desert in India.
2. The windward side has (concave slope) with maximum height at the centre.
3. Two ends of the barchan are called horns.

Which of the statements given above is/are correct?

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



19. Consider the following statements :
1. Geothermal energy can be used to produce electricity or its hot water can be used directly for industry, agriculture, bathing and cleaning.
 2. Nuclear energy is often cheaper than some other sources of electricity.
 3. Thermal power stations burn fossil fuels to create steam to drive the turbines.

Which of the statements given above is/are correct ?

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

20. Match List-I with List-II and select the correct answer using the code given below the Lists :

List-I
(International
Convention)

List-II
(Theme)

- | | |
|-------------------------|--|
| A. Stockholm Convention | 1. Hazardous chemicals and pesticides in international trade |
| B. Minamata Convention | 2. Persistent organic pollutants |
| C. Basel Convention | 3. Binding instrument on mercury |
| D. Rotterdam Convention | 4. Transboundary movement of hazardous wastes and their disposal |

Code :

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

21. The Judgment of the Supreme Court in *Peoples' Union for Civil Liberties v. Union of India* 2004 is related to which of the following ?

- (a) Right to Shelter
(b) Right against Custodial violence
(c) Right to Information
(d) Right to Speedy trial

22. Which among the following deals with Habeas Corpus ?

- (a) *State of Uttar Pradesh v. Raj Narain and Ors.* (1975)
(b) *Additional District Magistrate, Jabalpur v. Shivakant Shukla* (1976)
(c) *Mrs. Maneka Gandhi v. Union of India* (1978)
(d) *Nandini Satpathy v. P.L. Dani* (1978)

23. Which among the following statements regarding the powers of the High Courts under Article 226 of the Constitution of India is **not** correct ?

- (a) It can issue writs of habeas corpus, mandamus, quo warranto, certiorari, and prohibition.
(b) Writs can be issued to enforce any rights conferred by Part-III and for any other purpose.
(c) This power can derogate the power conferred on the Supreme Court under Article 32(2).
(d) Writ can be issued to any authority under its jurisdiction.

24. Which among the following is **not** correct ?

- (a) Legislation on criminal law, barring exceptions, is a subject under the Concurrent List.
(b) Bankruptcy and Insolvency are subjects under the Concurrent List.
(c) Inter-State trade and commerce is a subject under the State List.
(d) Banking is exclusively under the Union List.

25. 'Basel Convention', 'Rotterdam Convention' and 'Stockholm Convention' relate to which of the following ?

- (a) Human Rights of Prisoners
(b) Management of Pollutants
(c) Conservation of Wetlands
(d) Conservation of Rivers

26. The method used in separating a mixture of two miscible liquids having sufficient difference in their boiling points is :

- (a) Filtration
- (b) Solvent Extraction
- (c) Centrifugation
- (d) Simple Distillation

27. Which one of the following statements is correct ?

- ✓ (a) Alloys are mixtures.
- (b) Alloys are compounds.
- (c) Alloys are always made up of metals.
- (d) (All alloys contain carbon as one of their components.)

28. The common element in graphite, fullerene, diamond and graphene is :

- (a) Oxygen
- (b) Nitrogen
- (c) Hydrogen
- ✓ (d) Carbon

29. The gas generated on reacting zinc with dilute sulphuric acid is :

- (a) Argon
- (b) Helium
- (c) Hydrogen
- (d) Nitrogen

30. An aqueous solution of a salt is known as brine. The salt is :

- ✓ (a) Sodium chloride
- (b) Potassium chloride
- (c) Calcium chloride
- (d) Sodium nitrate

31. Which one of the following commissions was not associated with public services in India ?

- (a) Aitchison Commission
- (b) Islington Commission
- (c) Lee Commission
- ✓ (d) Radhakrishnan Commission

32. Who among the following was known as 'Lokhitwadi' ?

- (a) Keshub Chandra Sen
- (b) Gopal Hari Deshmukh
- (c) M.G. Ranade
- (d) Gopal Ganesh Agarkar

33. Match List-I with List-II and select the correct answer using the code given below the Lists :

List-I
(Harappan Site)

List-II
(Location)

- | | |
|---------------|------------------|
| A. Nageshwar | 1. Uttar Pradesh |
| B. Alamgirpur | 2. Rajasthan |
| C. Kalibangan | 3. Saurashtra |
| D. Rakhigarhi | 4. Haryana |

Code :

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

34. Which one of the following pairs of books and their authors is not correctly matched ?

- (a) *Bandi Jiwan* : Sachindranath Sanyal
- (b) *The Philosophy of the Bomb* : Bhagwati Charan Vohra
- (c) *Indian Unrest* : Annie Besant
- (d) *Desher Katha* : Sakham Ganesh Deuskar

35. Which of the following is/are important markers for the archaeologists to identify an archaeological site as a 'center of craft production'?

1. Evidence of raw materials such as stone nodules, whole shells, etc.
2. Geographical expanse of the site
3. Evidence of unfinished objects, rejects and waste material
4. Evidence of variety of pottery

Select the correct answer using the code given below :

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

36. In humans, urea is mainly formed from the metabolism of which one of the following components of food?

- (a) Fatty acids
- (b) Vitamins
- ☒ (c) (Amino acids)
- (d) Glucose

37. The lymph is mainly formed from the plasma of blood and it surrounds the cells. The main difference between blood and lymph is :

- (a) Lymph does not contain red blood cells.
- (b) Lymph does not contain white blood cells.
- ☒ (c) Lymph contains both red blood cells and white blood cells.
- (d) Lymph does not contain any cells.

38. For the digestion of carbohydrate, protein and fat, enzymes such as amylase, trypsin and lipase are required. It is secreted into the duodenum through :

- ☒ (a) Bile
- (b) Plasma
- (c) Lymph
- (d) Pancreatic juice

39. Lactic acid is formed in the muscles during exercise or running. It is formed :

- ☒ (a) to give extra energy from fat.
- (b) to give extra oxygen from lungs.
- (c) to give extra energy from glucose.
- (d) to give extra energy from vitamins.

40. Fiscal deficit in the Union Budget means :

- (a) the difference between current expenditure and current revenue.
- (b) net increase in the borrowings of the Union Government from the Reserve Bank of India.
- ☒ (c) the sum of budgetary deficits and the net increase in internal and external borrowings.
- (d) None of the above

41. Which one of the following is the largest component of (revenue expenditure) in the Union Budget 2022 - 23?

- (a) Interest payments
- (b) Defense expenditure
- (c) Expenditure on healthcare
- ☒ (d) Subsidies

42. Adequacy of foreign exchange reserves of a country is captured by which of the following indicators ?

1. Reserves to import ratio
2. Reserves to external debt ratio
3. Reserves to GDP ratio
4. Reserves to monetary aggregates

Select the correct answer using the code below :

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

43. If all the people of the economy increase the proportion of income they save, the total value of savings in the economy will either decrease or remain unchanged. This phenomenon is known as :

- (a) Crowding out
- (b) Crowding in
- ~~(c) Paradox of thrift~~
- ☒ (d) Paradox of prosperity

44. The banks are required to maintain a certain ratio between their cash in hand and total assets. This ratio is known as :

- (a) Cash Reserve Ratio (CRR)
- ☒ (b) Statutory Liquidity Ratio (SLR)
- (c) Central Bank Reserve (CBR)
- (d) Statutory Bank Ratio (SBR)

45. A simple harmonic motion of a particle is represented as, $y = 10 \cos \omega t$. The acceleration of the particle at time $t = \frac{\pi}{2\omega}$ will

be : (symbols here carry their usual meanings)

- (a) 10ω
- (b) $-10 \omega^2$
- (c) 0
- (d) $\frac{10}{\omega}$

46. A wire of resistance R is cut into four equal parts. These parts are then connected in parallel. If the equivalent resistance of this combination is R', then the ratio $\frac{R'}{R}$ is :

- (a) $\frac{1}{16}$
- (b) $\frac{1}{4}$
- (c) 4
- (d) 16

47. In experiment #1, a bar magnet is moved towards a conducting wire loop axially, with the magnet's north pole facing the loop. In experiment #2, the same process as in experiment #1 is repeated except that the south pole of the magnet faces the loop. Which one of the following statements is true in this context ?

- (a) The direction of current in the loop will be of opposite nature in both the experiments.
- (b) The direction of current in the loop will be the same in both the experiments.
- (c) No current will flow in either of the two experiments.
- (d) More current will flow in the loop in experiment #1.

48. Which one of the following correctly explains the change in seasons on Earth ?

- (a) Tilt of the Earth's axis
- (b) Rotation of the Earth on its own axis
- (c) Revolution of the Moon around the Sun
- (d) Interaction of the Earth with other planets

49. Consider the following statements :

- 1. The Great Northern Plains are formed by basins of three distinct river systems — the Indus, the Ganga and the Brahmaputra.
- 2. They are one of the most densely populated areas on Earth.
- 3. Between the Yamuna at Delhi and the Bay of Bengal, nearly 1600 km away, there is a drop of only 200 metres in elevation.

Which of the statements given above are correct ?

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

50. Consider the following statements :

- 1. Many of the world's largest mountain chains exist beneath the sea.
- 2. Some mountain chains are revealed as island arcs.
- 3. The mid-oceanic ridges form the longest mountain chains.
- 4. The mid-Atlantic ridge rises thirty-three metres above the floor of the Atlantic.

Which of the statements given above are correct ?

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

51. Which of the following is/are not correct about the Mother's Absolute Affection Programme ?

- 1. Allows all pregnant women to absolutely free and no expense delivery in public health institutions.
- 2. Provides assured, comprehensive and quality antenatal care.
- 3. Promotes undiluted focus on breastfeeding.
- 4. Provides medical and nutritional care to severely acute malnourished children.

Select the correct answer using the code given below :

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

52. Which of the following statements about the Right to Information Act, 2005 is/are correct ?

- 1. There shall be not more than twelve (12) Information Commissioners.
- 2. The Chief Information Commissioner shall hold office for a term of five years.
- 3. The Chief Information Commissioner is eligible for reappointment.

Select the correct answer using the code given below :

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

53. Who among the following was the first pro-tem Speaker to be unanimously elected as the Speaker of the Lok Sabha ?

- (a) Rabi Ray
- (b) Hiren Mukherjee
- (c) Somnath Chatterjee
- (d) P.A. Sangma

54. Consider the following statements with reference to Jainism :

1. Vardhamana Mahavira attained Kaivalyajnana outside the town of Jrimbhikagrama, on the banks of river Rijupalika and in the field of a householder named Samaga.
2. The state when the (Karma particles actually begin to flow towards the Jiva to bind it is known as Asrava.

Which of the statements given above is/are correct ?

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

55. Consider the following pairs with reference to textiles in Southern India :

(Tax)	(Meaning)
1. Panjupēeh	: on cotton yarn
2. Nulayam	: on cotton thread
3. Tāri kadamai	: on silk clothes ✓
4. Sella	: on silk thread

Which of the pairs given above is/are correct ?

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

56. Which one of the following animals does not come under the category of four noble animals (Maha-Ajaneya Pasu) carved on the round drum (Anda-Phalaka) of the lion capital at Sarnath ?

- ✓ (a) Deer
- (b) Lion
- (c) Bull
- (d) Horse

57. The ruler Vindhyaashakti during the period preceding the Gupta Age is associated with which one of the following dynasties ?

- (a) Vakatakas
- (b) Chalukyas
- (c) Kalachuris
- (d) Sungas

58. The ancient Indian medical treatise for horses called Ashvashastra is attributed to which one of the following persons ?

- (a) Vagbhatta of the seventh century
- (b) The sage Shalihotra
- (c) Bhartrihari of the seventh century
- (d) Varahamihira of the sixth century

59. The celebrated group of poets in medieval Mathura and Vrindavana called the Ashta-Chhapa were the successors of which one of the following medieval Bhakti Saints ?

- (a) Kabir of Benaras
- (b) Chaitanya of Bengal
- (c) Guru Nanak of Punjab
- (d) Surdas of Braj region

60. Consider the following statements about Laterite soil found in India :

1. Laterite soil is found in high altitudes of Himalaya.
2. It is a very fertile soil.
- ✓ 3. It is a red colour soil due to presence of iron oxide.
- ✓ 4. It is poor in Nitrogen, Potash and organic matter.

Which of the statements given above is/are correct ?

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

61. Which of the following statements about Ragi crop grown in India is correct ?

- (a) It is a millet crop grown in drier parts of south India.
- (b) It is a Rabi crop sown between November and March.
- (c) It is a rainfed crop grown on red, light black and sandy loam soil.
- (d) It is grown between 20 degree Celsius and 30 degree Celsius of temperature and 50 – 100 cm rainfall.

62. Consider the following statements about rock structure :

- 1. Conglomerates are clastic sedimentary rocks.
- 2. Slate is a non-clastic sedimentary rock.
- 3. Granite is a plutonic igneous rock.
- 4. Basalt is an extrusive igneous rock.

Which of the statements given above are correct ?

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

63. Consider the following statements about Ramsar Wetland sites in India :

- 1. Gahirmatha is the habitat of Olive Ridley Turtles. ✓
- 2. Chilka lake is the habitat of Irrawaddy Dolphin as its flagship species. ✗
- 3. Nalsarovar Wetland is also the habitat of Indian Wild Ass (Khur).
- 4. Tso Moriri Wetland is the habitat and breeding ground of Black-necked Crane.

Which of the statements given above are correct ?

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

64. Which of the following soil formation process takes place in Phumdis (floating fields) in Loktak Lake of Manipur ?

- (a) Laterization
- (b) Podzolization
- (c) Gleization
- (d) Calcification

65. Which one of the following statements is correct about Spring tides ?

- (a) High tide is higher than average high tide and Low tide is higher than average low tide.
- (b) High tide is lower than average high tide and Low tide is higher than average low tide.
- (c) High tide is higher than average high tide and Low tide is lower than average low tide.
- (d) High tide is lower than average high tide and Low tide is lower than average low tide.

66. Consider the following statements about IPL cricket tournament :

- 1. Two teams won the tournament five times each.
- 2. Chennai Super Kings remained runner-up in five editions of the tournament.
- 3. On three occasions, the final was played abroad.

Which of the statements given above is/are correct ?

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

67. Consider the following statements about Khelo India University Games (KIUG) :

1. The first edition of KIUG was held in Odisha.
2. The name of the mascot of the third edition of KIUG was Jeetu.
3. The first edition of KIUG was postponed due to COVID.

Which of the statements given above is/are correct ?

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

68. Exercise (Ajeya Warrior) is a biennial training event between the Indian Army and the army of :

- (a) Nepal
- (b) United Kingdom
- (c) Russia
- (d) Japan

69. The journey of the First Phase of Sagar Parikrama Yatra, an initiative of the Government of India, was started from :

- (a) Andaman and Nicobar Islands
- (b) Maharashtra
- (c) Karnataka
- (d) Gujarat

70. The annual Kheer Bhawani Mela is organized at :

- (a) Kabaw Valley
- (b) Kashmir Valley
- (c) Dah Hanu Valley
- (d) Upper Dibang Valley

71. NISAR satellite is manufactured jointly by Indian Space Research Organisation and :

- (a) Japan Aerospace Exploration Agency
- (b) National Aeronautics and Space Administration
- (c) Russian Federal Space Agency
- (d) European Space Agency

72. 'Operation Kaveri' is a rescue operation launched by the Government of India to evacuate Indian citizens who were stranded in :

- (a) Kuwait
- (b) Ukraine
- (c) Afghanistan
- (d) Sudan

73. 'Rail Vikas Nigam Limited' is a :

- (a) Maharatna CPSE
- (b) Navaratna CPSE
- (c) Miniratna I CPSE
- (d) Miniratna II CPSE

RVNL

74. What are Airawat, Param Siddhi, Pratyus and Mihir ?

- (a) Super Computers of India
- (b) Battle Tanks of India
- (c) Supersonic Missiles of India
- (d) Indian Naval Ships

75. Which one of the following Indian Naval Ships has recently concluded a 17,000-nm trans-ocean intercontinental voyage ?

- (a) INS Tarangini
- (b) INS Mandovi
- (c) INSV Mhadei
- (d) INSV Tarini

76. An Indian businessperson buys shares in a British car company. This transaction will be reflected in :

- (a) Balance of Trade, but not in Balance of Payments.
- (b) Balance of Payments, but not in Balance of Trade.
- (c) both Balance of Payments and Balance of Trade.
- ☒ (d) neither Balance of Payments nor Balance of Trade.

77. Which of the following are High Frequency Indicators of the Indian economy ?

- 1. Power Consumption
- 2. IIP General Index
- 3. 10-year G-sec yield

Select the correct answer using the code below.

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

78. Suppose an Indian citizen makes an investment abroad and earns a positive return on her investment. Which of the following is correct ?

- (a) Her income is part of India's GDP, but not part of India's national income.
- ☒ (b) Her income is part of India's national income, but not part of India's GDP.
- (c) Her income is part of both India's GDP and national income. ✗
- (d) Her income is neither part of India's GDP, nor its national income. ✗

79. If the Cash Reserve Ratio is lowered by the RBI, supply of money in the economy will :

- (a) remain unchanged.
- (b) decrease.
- ☒ (c) increase.
- (d) have ambiguous impact.

80. Which one of the following is the main cause of the acid rains ?

- ☒ (a) The Sun causes heating of upper layer of atmosphere.
- ☒ (b) The burning of fossil fuels releases oxides of carbon, nitrogen and sulphur in the atmosphere.
- (c) The electrical charges are produced due to friction amongst clouds.
- ☒ (d) The atmosphere of the Earth contains acids.

81. Biogas is considered to be an excellent fuel which burns without smoke. The main constituent of biogas is :

- ☒ (a) methane
- (b) hydrogen
- (c) carbon dioxide
- (d) hydrogen sulphide

82. The depletion in atmospheric ozone layer in last century was due to :

- (a) chlorofluorocarbon
- ☒ (b) carbon monoxide c
- (c) methane
- (d) pesticides ✗

83. Which one of the following holds true for a freely falling object ?

- (a) It moves with a uniform velocity.
- ☒ (b) It moves with a uniform speed.
- (c) It moves with a non-uniform acceleration.
- (d) It moves with a uniform acceleration.

84. A sound wave of frequency of 2 kHz has a wavelength of 35 cm in a given medium. How long will it take to travel a distance of 2.1 km through the medium ?

- (a) 30 s
- (b) 2.1 s
- (c) 3.0 s
- (d) 4.1 s

85. Which one of the following conservation laws is a consequence of the Newton's third law of motion ?

- (a) Conservation of energy
- (b) Conservation of momentum
- (c) Conservation of charge
- (d) Conservation of mass

86. Which one of the following is a permeable rock that allows water to pass through it ?

- (a) Granite
- ☒ (b) Limestone
- (c) Quartzite
- (d) Sill

87. Which one of the following is the deepest, inland and protected port on the east coast of India ?

- ☒ (a) Chennai
- (b) Paradip ✗
- (c) Tuticorin
- (d) Visakhapatnam ✗

88. The greatest diversity of animal and plant species is found in :

- (a) Temperate forests
- (b) Deserts and Savannas
- (c) Arctic and Alpine systems
- ☒ (d) Tropical moist forests

89. Which one among the following statements about 'Drumlin' is correct ?

- (a) It is a streamlined (hill) moulded in glacial drift on the till plains.
- (b) It is a city located in central Europe.
- ☒ (c) It is a river.
- (d) It is a narrow road in Tibet.

90. Which one of the following is the busiest sea route and links two (industrially) developed regions of the world ?

- (a) Mediterranean – Indian Ocean sea route
- (b) The Northern Atlantic sea route
- ☒ (c) Cape of Good Hope sea route
- (d) The North Pacific sea route

91. Using the code given below identify the type of farming on the basis of given characteristics :

1. The produce is consumed entirely or mainly by the family who work the land or tend the livestock.
2. If a small surplus is produced, it may be sold or bartered.
3. It is generally small scale and (labour intensive) with little or no technological input.

Code :

- (a) Extensive farming ✗
- (b) Intensive farming ✗
- ☒ (c) Subsistence farming
- (d) Commercial farming ✗

92. Car A takes 1 hour more than car B, which travels at a speed of 60 km per hour, to cover some fixed distance. If car A had doubled its speed, it could cover the distance in 1 hour less time than car B travelling at 60 km per hour. What is the original speed of car A in km per hour ?
- (a) 30
(b) 40
(c) 45
(d) 50
93. Suppose A, B and C are three taps fixed to the bottom of a tank with draining capacity 1 : 2 : 3. When all three of them are on, it takes 1 hour to drain out the full tank. If A and C are on but B is off, then how much time, in minutes, will it take to empty out a full tank of water ?
- (a) 75
(b) 90
(c) 105
(d) 120
94. Assume that the Earth is a spherical ball of radius x km with a smooth surface so that one can travel along any direction. If you have travelled from point P on the Earth's surface along the East direction a distance of πx km, which direction do you have to travel to return to P so that the distance required to travel is minimum ?
- (a) East only
(b) West only
(c) East or West but not any other direction
(d) Any fixed direction
95. If x and y are two-digit prime numbers such that y is obtained from x by interchanging its digits and $x - y = 36$, then what is the value of xy ?
- (a) 1611
(b) 2701
(c) 4031
(d) 5603
96. Sixty-four cubes of sides 2 cm each are combined to form a cube of side 8 cm. If four of the smaller cubes along the diagonal of a surface are removed from the surface of the large cube, which one of the following statements about the surface area of this solid object is true ?
- (a) It is equal to the surface area of the large cube.
(b) It is less than the surface area of the large cube.
(c) It is more than the surface area of the large cube.
(d) Insufficient data
97. Which of the following statements about Organization for Security and Cooperation in Europe (OSCE) are correct ?
1. There are total 57 states from Europe, Central Asia and America.
 2. It offers a forum for political negotiations and decision-making in the field of early warning, conflict prevention, crisis management and post-conflict rehabilitation.
 3. OSCE has the primary responsibility of \rightarrow providing (military security) in the (European Region).
 4. The decisions of OSCE are legally binding.
- Select the correct answer using the code given below :
- (a) 1 and 2 only
(b) 1, 2 and 3 only
(c) 1, 2, 3 and 4
(d) 3 and 4 only

98. Which of the following statements about Quad is/are correct ?

1. It is a group of four countries, namely, India, Australia, USA and France.
2. Maritime cooperation is an important binding force among members of the Quad.
3. The Quad members formed a working group on COVID-19 vaccines.

Select the correct answer using the code given below :

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

99. The National Human Rights Commission was established under the statute of :

- (a) The Protection of Human Rights Act, 1993
- (b) The Protection and Implementation of Human Rights Act, 1993
- (c) The Human Rights Act, 1993
- (d) The Human Rights Commission Act, 1993

100. Which of the following is/are not an official language(s) of the United Nations ?

1. Arabic
2. German
3. Spanish
4. Chinese

Select the correct answer using the code given below :

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

101. Pointing towards a photograph Mr. Ajit said, "She is my father's wife's son's only sister."

What is the relation of the person in the photograph with Mr. Ajit ?

- (a) Daughter
- (b) Mother's sister
- (c) Cousin
- (d) Sister

♂ → पति की wife
↓
son's only sister

102. Three circles of radius 5 cm each, touch each other. If the points of contact are P, Q and R, then what is the area of the triangle PQR in sq. cm ?

- (a) $\frac{25\sqrt{3}}{6}$
- (b) $\frac{25\sqrt{3}}{4}$
- (c) $\frac{25\sqrt{3}}{2}$
- (d) $25\sqrt{3}$

103. The right-angled triangle ABC is such that $\angle B = 90^\circ$. Point D is picked on BC such that triangles ABC and DBA are similar. If $AB : BC = m : n$, what is $\Delta ABC : \Delta ABD$, where Δ denotes the area of a triangle ?

- (a) $n : m$
- (b) $n^2 : m^2$
- (c) $(m + n) : n$
- (d) $(m + n)^2 : n^2$

104. On a large ground, there is a straight tall vertical wall of length 28 m. A goat is tied to a point on the ground which is at the middle of the wall, using a rope. If the length of the rope is 21 m, what is the area of the region (in sq. m) around the wall that the goat can access ?

- (a) 847
- (b) 851
- (c) 693
- (d) 654

105. A rectangular wall is divided into four squares of equal size where there are two rows each having two squares. The top left square is coloured with green. If, including green, there are three colours available and each square is coloured using any one of these three colours such that no two adjacent squares get painted with the same colour; then how many colour combinations are possible ?

- (a) 2
- (b) 4
- (c) 6
- (d) 8

106. Which of the following statements about National Emergency is/are correct ?

- ✓ 1. A Proclamation of Emergency may be made by the President only when the (security of India) or any part thereof is threatened by war or external aggression or armed rebellion.
- 2. The Government of India acquires power to give directions to a State on any matter.
- 3. The Proclamation of Emergency does not suspend the State legislature.
- 4. The Proclamation of Emergency can continue for a maximum period of six months at a time (only) if approved by resolutions of both the Houses of Parliament.

Select the correct answer using the code given below :

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

107. Which one of the following statements with regard to the impeachment of a Judge of the Supreme Court of India is (not) correct ?

- ✓ (a) A motion addressed to the President, signed by at least 100 members of both the Houses of the Parliament is delivered to the Speaker.
- (b) The motion is investigated by a Committee of three (2 Judges of the Supreme Court and a distinguished Jurist).
- (c) If the Committee finds the Judge guilty of misbehaviour or that he suffers from incapacity, the motion together with the report of the Committee is taken up for consideration in the House where the motion is pending.
- (d) The (Judge) will be removed after the President gives his order for removal.

108. Which of the following are India's G20 priorities ?

- 1. Green Development
- 2. Women-led Development
- 3. Climate Finance ✓
- 4. Digital Public Infrastructure ✓

Select the correct answer using the code given below:

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

109. Which of the following are the objectives of SAARC ?

1. To promote the welfare of the peoples of South Asia and to improve the quality of life
2. To promote and strengthen collective self-reliance among the countries of South Asia
3. To contribute to (mutual trust) understanding and appreciation of one another's problems ✓
4. To work towards ending cross-border terrorism ✓

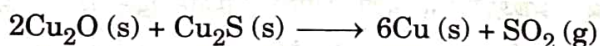
Select the correct answer using the code given below :

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

110. Pure, demineralized water, free from all soluble mineral salts is obtained by which of the following method ?

- (a) Passing water through microfiltration membrane
- (b) Calgon's method
- (c) Passing water through a cation exchange and an anion exchange resin bed
- (d) By boiling

111. Consider the following redox reaction :



Identify the species among the following acting as oxidant and reductant, respectively :

- (a) Cu(I) and S of Cu_2S
- (b) Cu and S of SO_2
- (c) Cu and O of SO_2
- (d) Cu(I) and O of SO_2

112. Which one of the following statements is **not** correct regarding the setting of cement ?

- (a) The addition of a small percentage of gypsum (CaSO_4) lengthens the setting period of cement.
- (b) According to the colloidal theory, gels of hydrated silicates are formed and when these gels harden, the set cement loses strength.
- (c) Tricalcium silicate is responsible for initial setting of cement.
- (d) Dicalcium silicate and tricalcium silicate are responsible for the final strength which occurs in about a year.

113. Which one is the most abundant of all the elements on Earth ?

- (a) Silicon
- (b) Aluminium
- ☒ (c) Carbon
- (d) Oxygen

114. Which one of the following metals does **not** react with oxygen directly ?

- (a) Ti
- (b) Fe *Iron*
- (c) Pt
- (d) Zn *Zinc*

115. Consider the following observations about the largest stupa at Sanchi :

1. Going by information available from the inscriptions on the railings of the stupa, the construction of part of one of its (gateways) was financed by the Guild of Ivory workers.
2. In its original early form, this stupa was plain except for the stone railings and the gateways, which were richly carved.
3. The panels on the four gateways contain sculptures only in the front and have no sculptures on the (rear side).
4. In 1918, when the stupa was discovered, all of its four gates were intact but the mound was in poor condition.
5. Art historians have established clear connections between the sculptures of the stupa with events described in Jataka Tales.
6. War scenes have also been depicted in these sculptures.

Which of the observations given above are correct ?

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

116. Which of the following pairs are correctly matched ?

(Inscription / Event)	(Time Period)
1. Prayag Prashasti by Harishena	: 4 th century CE
2. Chinese traveller Fa Xian's Account	: 6 th century CE
3. Mudrarakshasa of Vishakhadatta	: 5 th century CE
4. Harshacharita of Banabhatta	: 6 th century CE
5. Aihole Prashasti of Ravikirti	: 7 th century CE
6. Kavirajamarga of Amoghavarsha	: 8 th century CE

Select the correct answer using the code given below :

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

117. Which one of the following statements is (correct ?)

- (a) Brahmi, used for writing many Ashokan inscriptions, shows local variations.
- (b) The system of hieroglyphic writing was developed in ancient Mesopotamia.
- (c) The system of cuneiform writing developed around 3rd millennium BCE in Egypt.
- (d) An ancient script, (Kharoshthi) was widely used in the southern part of India. ✗

118. Which one of the following activities was not a part of the (daily) time-table for a King as prescribed in Arthashastra ?

- (a) Receive reports on defense ✓
- (b) Visit the town incognito
- ☒ (c) Receive revenue in cash
- (d) Consult his Council of Ministers ✓

119. Which organelle other than nucleus in eukaryotic cells has its own DNA, ribosomes and proteins?
- Golgi
 - ☒ Mitochondria
 - Lysosomes
 - Nucleosomes
120. For protein synthesis, the amino acids are recognized and carried by:
- mRNA
 - snRNA
 - miRNA
 - ☒ tRNA
121. In vertebrates, smooth endoplasmic reticulum in cells of which organ plays a crucial role in (detoxification) of toxic compounds?
- Spleen
 - Intestine
 - ☒ Kidney
 - ~~Liver~~
122. The rate of an enzyme catalyzed reaction depends :
- upon substrate concentration, temperature and pH.
 - only on substrate concentration and pH, but not on temperature.
 - only on pH and temperature, but not on substrate concentration.
 - only on temperature, but not on pH and substrate concentration.
123. Both starch and glycogen are made up of glucose, however :
- starch is present in liver and glycogen is present in red blood cells.
 - glycogen is made in animal cells, but starch is made in plant cells.
 - both starch and glycogen are present in animal and plant cells.
 - both starch and glycogen are present in plant cells only.
124. In some viral infections, number of platelets are reduced quickly. Platelets are essential because :
- ☒ they along with red blood cells carry oxygen.
 - ☒ platelets are important to carry food to cells through blood.
 - platelets remove carbon dioxide from blood.
 - ☒ platelets have a role in blood clotting.
125. The focus of the Second Five Year Plan was :
- establishment of a self-reliant and self-generating economy with emphasis on agriculture.
 - rapid industrialization with emphasis on the development of basic and heavy industries.
 - removal of poverty and attainment of self-reliance.
 - ☒ acceleration of food-grain production and increase in employment opportunities and overall productivity.