



# All India Civil Services Coaching Centre

(Under the aegis of Government of Tamil Nadu)

## TEST BOOKLET

### Test 8 – GS Paper I

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**Time Allowed: 2 Hours**

**Maximum Marks: 200**

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## INSTRUCTIONS

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET DOES NOT HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET
2. You have to enter your Name on the Test Booklet
3. This Test Book contains 100 items (questions). Each it comprises four responses (answers). You will select the response, which you want to mark on the Answer Sheet. In case you feel that there is more than one correct response, mark the response, which you consider the best. In any case, choose ONLY ONE response for each item.
4. You have to mark all your response ONLY on the separate sheet provided along with the Test Booklet.
5. All items Carry equal marks. There will be **penalty (negative marking)** for wrong answers marked by you in the Answer sheet.
6. There are four alternatives for the answers to every question. For each question for which a wrong answer has been given by the candidate, one third ( $\frac{1}{3}$ ) of the marks assigned to that question will be deducted as penalty.
7. If a candidate gives more than one answer, it will be treated as a wrong answer even if one of the given answers happens to be correct and there will same penalty as above for that question.
8. If a question is left blank i.e., no answer is given by the candidate, there will be no penalty for that question.

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1. Which of the following developments have led to successful implementation of Directive Principles of State Policy?

1. Untouchability (Offences) Act, 1955
2. Adherence to non-alignment Panchsheel
3. The Maternity Benefit (Amendment) Act 2017
4. Formation of National Commission for Backward Classes

Select the correct answer from the code given below:

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

2. Consider the following statements related to the contributions of Indo-Greek Rule in ancient India:

1. The Indo-Greeks rulers were the first to issue punch marked coins in India.
2. They had introduced the Hellenistic art used in Gandhara School of Art.
3. They had sent missionaries to Central Asia and China for the propagation of the Buddhism and Jainism.

Which of the above given statements are incorrect?

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

3. Match the following:

<b>List A</b> <b>(Sites)</b>	<b>List B</b> <b>(Pre Historic Age)</b>
A. Bhimbetka	I. Paleolithic
B. Nagarjunakonda	II. Mesolithic
C. Adamgarh	III. Neolithic
D. Brahmagiri	IV. Chalcolithic

**Codes:**

- (a) A-I; B-II; C-III; D-IV
- (b) A-I; B-IV; C-II; D-III
- (c) A-II; B-III; C-IV; D-I
- (d) A-I; B-II; C-IV; D-III

4. Consider the following statements:

1. All the planets except Venus rotate on an axis perpendicular to the plane of their respective orbits around the Sun.
2. Inner planets of the solar system are relatively small rocky planets made up of silicate minerals along with iron and nickel metals.
3. The conditions on the Outer planets are suitable for hydrogen compounds to take liquid form that can sustain human settlement in the future.

Which of the statements given above is/are correct?

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

5. Which of the following techniques can be used as a mitigation measure for Landslides?

1. Site leveling drainage technique
2. Usage of Gabion wire mesh
3. Shifting Cultivation in hilly regions
4. Excavation of soil from the head of the slope.

Select the correct answer using the codes given below:

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

6. Advance Pricing Agreement (APA) provisions were introduced in the Income-tax Act, 1961. Consider the following statements regarding the same:

1. An APA is a contract between a taxpayer and at least one tax authority specifying the pricing method that the taxpayer will apply to its related-company transactions for previous years.
2. These agreements would be binding both on the taxpayer as well as the government.
3. The APA can be entered for the period of not less than 5 consecutive years.

Which of the above statement/s is/are correct?

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

7. Consider the following statements regarding Poverty estimation in India:

1. Poverty estimation in India is now carried out by NITI Aayog's task force
2. Poverty line estimation in India is based on the income levels
3. Up until 1993-94, the poverty line was based on Uniform Resource Period (URP)

Which of the above statements is/are correct?

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

8. Consider the following statements about Biological Diversity Act, 2002:

1. An Indian citizen can obtain any biological resource for commercial utilization after giving prior intimation to the National Biodiversity Authority.
2. Local people and communities of the area require permission from the State Biodiversity Authority to obtain any biological resources in that area.
3. A foreign person can obtain any biological resource occurring in India with approval from the National Biodiversity Authority.

Which of the statements given above is/are correct?

- (a) 3 only

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

9. Which of the following statements is incorrect about the Bioremediation technology?

- (a) Bioremediation is the use of living micro-organisms to degrade the environmental contaminants into less toxic forms.
- (b) It uses naturally occurring bacteria and fungi only to degrade or detoxify substances hazardous to human health and/or the environment.
- (c) It can be effective only where environmental conditions permit microbial growth and activity.
- (d) Biodegradation of a compound is often a result of the actions of multiple organisms.

10. Which of the following cell organelles is/are not the part of phagocytic/endocytic process?

1. Lysosome
2. Golgi complex
3. Plasma membrane
4. Ribosome
5. Exosome
6. Nucleus

Select the correct answer using the following code:

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

11. Which of the following statements regarding the DNA sequencing methods and Human genome are correct?

1. CRISPR-Cas9 technology is one of the examples of Next Generation Sequencing technology.
2. Human genome consists of 24 distinct chromosomes that contain about 3 billion base (A, T, G, and C) pairs.
3. Human Genome Project was undertaken to determine the sequence of each base pair in entire human genome.

Select the correct answer using the following code:

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

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

12. With respect to the RBI's Voluntary Retention Route (VRR), consider the following statements:

1. This Route enables the FPIs to invest in both equities and debt market in India.
2. There is no limit on the investment under this Route.

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

13. With respect to saffron cultivation, consider the following statements:

1. India accounts for the largest share both in terms of area and production of saffron at the global level.
2. Jammu and Kashmir is the largest producer of saffron in India.

Which of the statements given above is/are correct?

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

14. Which of the following are the features of a Presidential form of government?

1. Separation of Power
2. Wider Representation
3. Stable government
4. No dissolution of Lower House

Select the correct answer from the code given below:

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

15. Consider the following statements regarding 'Equality before Law':

1. It means absence of special privileges to any person.
2. It means that no person is above the law.

3. The concept of Equality before law is borrowed from the American Common Law.

Which of the above statements is/are correct?

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

16. Which of the following statements regarding the duties and functions of CAG as laid down by the Parliament and the Constitution are correct?

1. He audits balance sheets and other subsidiary accounts kept by any department of central and state government.
2. He can audit the accounts of Panchayati Raj Institutions and Urban Local Bodies but with the permission of the State government.
3. He audits the trading and manufacturing accounts of government departments.

Select the correct answer using the code given below:

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

17. With reference to Prehistoric Rock Paintings, consider the following statements:

1. The rock paintings of Upper Palaeolithic period are linear representations.
2. At Bhimbetka caves, the themes of paintings included hunting dancing and animal fighting.
3. Rock shelters on banks of the River Sual at Lakhudiyar have paintings of humans only.

Which of the statements given above is/are correct?

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

18. Along with the Muziris in Kerala, the ancient Barygaza port was known as a 'commercial emporium' to the Romans and Greeks. It was through this port, the goods of the Kushan empire were sent across to Europe and the Middle east. The port town is located in which state?

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

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

19. Consider the following pairs:

- 1. Banawali — Terracotta Plough
- 2. Lothal — Major port town
- 3. Chanhudaro — Manufacturing Carnelian Beads

Which of the pairs given above is/are correctly matched?

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

20. With reference to the sedimentary rocks, consider the following statements:

- 1. They are stratified rocks.
- 2. They are found under the water.
- 3. They are mostly crystalline in nature.
- 4. Dolomite is a sedimentary rock.

Which of the above statements are correct?

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

21. With reference to measurement of volcanic eruptions, consider the following statements:

- 1. The volcanic eruptions are measured using Volcanic Explosivity Index.
- 2. It measures the duration of the eruption and damages to life and property.

Which of the above-mentioned statements is/are correct?

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

22. Which of the following are the examples of "Mechanical Weathering"?

- 1. Frost action
- 2. Rusting iron
- 3. Wind abrasion
- 4. Thermal expansion

Which of the above options is/are correct?

- (a) 1, 2 and 3 only

23. Which of the following sectors/categories fall under Priority Sector Lending (PSL)?

- 1. Loan to minorities
- 2. Education loan
- 3. Loans for renewable energy
- 4. Overdraft under Pradhan Mantri Jan Dhan Yojana
- 5. To startup companies

Select the correct answer using the code given below:

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

24. Consider the following statements about Cash Reserve Ratio (CRR):

- 1. It is the fraction of the total Net Demand and Time Liabilities (NDTL) of a Scheduled Commercial Bank in India that has to maintain as cash deposit with the RBI.
- 2. It applies uniformly to all banks in the country irrespective of an individual bank's financial situation or size.
- 3. Non-Bank Financial Corporations (NBFCs) also come under the purview of CRR.
- 4. Banks are paid interest for parking the required cash under CRR.

Which of the above statements are correct?

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

25. Which of the following constitute a part of the revenue receipts of the government of India?

- 1. Interest receipts on loan by the Government
- 2. Dividends earned by the Government on investments
- 3. Receipts through PSU disinvestments
- 4. Cash grants-in-aid from foreign countries

Select the correct answer using the code given below:

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

26. Consider the following statements with reference to Black Carbon:

1. It's affected is limited as it stays in atmosphere for only several days to weeks.
2. They move up in the stratosphere and deplete the ozone layer.
3. It accelerates the melting of glaciers.

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) 1, 2 and 3

27. Consider the following statements about smog:

1. Smog is unhealthy to humans and animals, and it can kill plants.
2. Photochemical smog is produced when sunlight reacts with nitrogen oxides and at least one volatile organic compound (VOC) in the atmosphere.

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

28. Which of the following statements is/are correct about the impacts of sand mining?

1. Sand mining can create turbidity in the water.
2. It contributes to bank erosion and sinking deltas.

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

29. Which of the following statements is/are correct regarding nuclear fission reaction and its use as power generation?

1. Nuclear fissile materials have highest

energy density of all the fuel materials that are conventionally used for power generation to date.

2. Nuclear energy is one of the examples of renewable source of energy.
3. India has one of the largest reserves of Thorium-232, which is a fissile material that can be used as nuclear fuel in for power generation.

Select the correct answer using the following code:

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

30. Consider the following statements about the nutrition for the human body and its roles:

1. The chemical digestion of the food begins in the buccal cavity.
2. Out of all the nutrients in human food, carbohydrates are the only source of energy while other nutrients function as building blocks or regulatory roles.
3. Pantothenic Acid is a water-soluble vitamin.
4. The human body cannot synthesize vitamin B3 (niacin), so its requirement must be fulfilled by dietary intake.

Select the correct answer using the following code:

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

31. Which of the following is/are correct about the optical properties of the light and its application?

1. The signal in optical-fibre cables travels with the speed of light and its transmission is based on the phenomenon of total internal reflection.
2. In a satellite dish antenna (or parabolic antenna), the surface of the concave dish works as the receiver and larger surface area of the dish results in better signal strength.
3. The image formed on the retina of the

human eye is 180° rotated projection of the object along the principle axis of the eye's lens.

Select the correct answer using the following code:

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

32. With reference to the Malaria-free certification by WHO, consider the following statements:

1. Countries that have achieved at least three consecutive years of zero indigenous cases can apply for Malaria-free certification by WHO.
2. Recently, China and El Salvador were declared malaria-free by the WHO.
3. In the WHO South-East Asia Region the main contributor for Malaria cases is by India.

Which of the statement given above are correct?

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

33. Which one of the following pass is not crossed by the Manali - Leh highway?

- (a) Lungalacha la
- (b) Shipki la
- (c) Baralacha la
- (d) Rohtang la

34. With reference to recently in news project BOLD, consider the following statements:

1. It aims to develop green cover in the Indian deserts of Rajasthan
2. It was launched from a tribal village Nichla Mandwa in Udaipur district in Rajasthan.
3. The initiative has been launched as part of KVIC's "Khadi Bamboo Festival" to celebrate 75 years of independence "Azadi ka Amrit Mahotsav".

Which of the statements given above are correct?

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

(d) 1, 2 and 3

35. Which city became the "first green industrial city" in India to receive a platinum rating under IGBC Green Cities Rating for existing cities in the industrial cities category ?

- (a) Gujarat International Finance Tec-City
- (b) Kandla Special Economic Zone
- (c) Cochin
- (d) Kerala

36. Consider the following statements regarding the leader of opposition:

1. The leader of opposition in the Lok Sabha has a statutory recognition.
2. The leader is entitled to the salary, allowances and other facilities equivalent to that of a cabinet minister.
3. The leader of the largest opposition party is recognized as the leader of the opposition.

Which of the above statements is/are correct?

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

37. Which of the following Fundamental Rights is/are available to both the citizens and the foreigners?

1. Equality before law and equal protection of laws.
2. Equality of opportunity in the matters of public employment.
3. Prohibition of traffic in human beings and forced labour.

Select the correct answer using the code given below:

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

38. Which of the following statements is/are correctly related to 'Doctrine of Harmonious Construction'?

1. The doctrine aims to save a part of a statute, when some section of statute has been found void by the Supreme Court.

2. The doctrine has been invoked to create a balance between Fundamental Rights and Directive Principles of State Policy.

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

39. Consider the following statements:

- 1. The writ of Mandamus can be issued against a private individual or body.
- 2. The writ of Prohibition can be issued only against judicial and quasi-judicial authorities.

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

40. There is no evidence of anything resembling the compositions of Alvars and Nayanars in north India till the 14th Century. In this context, consider the following statements:

- 1. Emergence of Rajput states
- 2. Establishment of Delhi Sultanate
- 3. Emergence of new urban centers

Which of the above statements can be the reason for absence of Bhakti Group in North India till 14th century?

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

41. With reference to Sher Shah Suri, the founder of Sur Empire, consider the following statements:

- 1. He made significant changes in the administration divisions as compared to Delhi Sultanate by following a decentralized system of administration.
- 2. He introduced liberal policies like abolition of Jizyah.
- 3. He paid great attention to improvement of communications in his kingdom.

Which of the above statements is/are

incorrect?

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

42. Consider the following statements related to the Ashokan Inscriptions:

- 1. The Ashokan inscriptions are found only in India and located generally on ancient highways.
- 2. The name of Ashoka occurs in Major Pillar Edict found at Madhya Pradesh.
- 3. The other inscriptions refer to him as devanampiya (beloved of the gods) and piyadasi.
- 4. The inscriptions of Ashoka were mainly written in Prakrit language with Brahmi Script.

Which of the above given statements is/are correct?

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

43. Consider the following statements regarding Mughal architecture:

- 1. Akbar used red sandstones inlaid with white marbles.
- 2. Itmad-ud-daula's tomb was the first pure marble monument.
- 3. Both, Architecture and fine arts declined during Aurangzeb's reign.

Which of the above statements are correct?

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

44. Consider the following statements regarding Buddhism and Jainism architecture:

- 1. Stupa, Vihara and Chaitya are part of both Buddhist and Jaina monastic complexes.
- 2. Chaitya were constructed over the relics of the Buddha at different places.
- 3. The construction of stupa has been patronised by kings only.

Which of the statements given above are correct?

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

45. With reference to the various types of inversion of temperature, consider the following statements:

1. The frontal inversion occurs when the warm air is pushed up by the cold air in the temperate zone.
2. The surface inversion of temperature happens when there is an advection of the cold air into warm air zone and warm air is pushed up.
3. The valley inversions occurs when the cold air descends down in the valley and pushes warm air up during day time.
4. The ground inversion occurs when there is an intensive radiation cooling of the surface of the earth.

Which of the statements given above is / are correct?

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

46. Which of the following are the conditions necessary for the phenomenon of "Aircraft Icing" to happen?

1. It happens when the aircraft surface temperature is above freezing point and surrounding temperature is below freezing point.
2. There should be sufficient availability of precipitation in the form of rainfall.
3. Supercooled water droplets should be present around aircraft.

Select the correct answer from the code given below

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

47. With reference to recent World Migration Report 2022, Consider the following statements:

1. The total percentage of international

migrants across the world comprised of 3.6% of global population.

2. The share of female migrants to the male migrants worldwide have increased largely in past 20 years.
3. India is the top migrant origin country in the world.

Which of the statements given above is/are correct?

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

48. Which of the following factors is/are taken into consideration for the calculation of Gross Domestic Product (GDP) at basic price?

1. Cost of factors of production
2. Production taxes and subsidies
3. Product taxes and subsidies

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

49. Which of the following can be considered as the factor(s) contributing to 'Structural Inflation' in a country?

1. Lack of cold chain infrastructure in agriculture
2. Excessive deficit financing
3. Shortage of essential resources
4. Lack of adequate forex reserves

Select the correct answer using the code given below:

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

50. Which of the following statements are correct about the Bank Rate?

1. It is the rate of interest charged by the Reserve Bank of India (RBI) for lending money to the banks against eligible securities.
2. It served as a benchmark for determining other rates of interest by the RBI.

3. Higher bank rate will translate to higher lending rates by the banks.

Select the correct answer using the code given below:

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

51. Which of the following statements are correct?

- 1. All currency notes are printed at the printing presses functioning under the RBI.
- 2. The coins are minted at the government mints under the Ministry of Finance.
- 3. If the deficit is financed through the printing of money, it is known as the monetization of deficit.

Select the correct answer using the code given below:

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

52. Which of the following is/are likely impact(s) of climate change?

- 1. Rising temperature will increase the use of fertilisers resulting in rise in cost of crop production
- 2. Moderate warming is expected to benefit crop yields in temperate regions
- 3. Arable land in high-latitude region is likely to increase while those in coastal areas are likely to decrease

Select the correct answer using the code given below:

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

53. Consider the following statements with reference to CycloPentane:

- 1. It is a Chlorofluorocarbon(CFC) with zero ozone depletion potential and zero global warming potential.
- 2. Ministry of Environment, Forests and Climate Change has recently proposed the foam industries to shift to CycloPentane.

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

54. Acid rain is caused mainly by the presence of sulphuric and nitric acids in the rain water which are result of oxidation of sulphur and nitrogen. Consider the following statements with regard to it.

- 1. Burning of fossil fuel and bio-mass are the causes of Acid rain.
- 2. The neutral pH value of rain water is 5.6
- 3. Calcareous soil act as a potential neutralizer of acidic component of rain water.

Which of the statements given above is/are correct?

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

55. Which of the following statements is/are correct about quantum technology?

- 1. Unlike conventional encryption, quantum communication is considered immune to hacking.
- 2. In 2016, China launched the world's first quantum communication satellite (QUESS, or Mozi/Micius) and achieved quantum key distribution (QKD) with two ground stations.

Select the correct answer using the codes given below:

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

56. Light-emitting diodes (LEDs) are widely being used from remote controls to produce LASER or as common household illumination, due to their high efficiency? Considering this, which of the following statements is/are correct?

- 1. Different semiconductor materials are used in LEDs that produce different colors (wavelengths).
- 2. The recombination of electrons and

electron holes in a semiconductor produces light (be it infrared, visible, or UV), a process called "electroluminescence".

3. LEDs can be powered both by direct current (DC) or alternating current (AC) whereas; AC is needed to power common tungsten filament bulbs in houses.

Select the correct answer using the following code:

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

57. What is 'AEG12', that is often mentioned in the news?

- (a) Molecular scissors used in targeted gene editing.
- (b) A protein effective against flaviviruses.
- (c) A gene that makes plants pest-resistant.
- (d) A herbicidal substance synthesized in genetically modified crops.

58. Consider the following statements about the Remission of Duties and Taxes on Exported Products (RoDTEP) Scheme:

- 1. The RoDTEP Scheme has replaced the popular Merchandise Exports from India Scheme.
- 2. Under the Scheme, the embedded central, state and local duties or taxes will get refunded and credited in an exporter's ledger account with customs.
- 3. Benefit of Remission of Duties and Taxes on Exported Products (RoDTEP) Scheme are extended to all export goods.

Which of the statements given above is/are correct?

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

59. 'Project RE-HAB', sometimes in news, is related to which of the following animals?

- (a) Tiger
- (b) Elephant
- (c) Lion
- (d) Olive Ridley Sea Turtle

60. Which of the following statement regarding Adjournment Motion is incorrect?

- (a) Adjournment Motion is the procedure for adjournment of the business of the House for the purpose of discussing a definite matter of urgent public importance.
- (b) The Adjournment Motion, if admitted, leads to setting aside of the normal business of the House for discussing the matter mentioned in the motion.
- (c) Its adoption is regarded as a sort of censure of the Government.
- (d) The motion can be adopted in both Lok Sabha and Rajya Sabha.

61. In which of the following matter Rajya Sabha has special powers with respect to Lok Sabha?

- (a) Introduction and passage of Constitutional amendment bills.
- (b) Introduction and passage of financial bills involving expenditure from the Consolidated Fund of India.
- (c) Initiation of a motion for the removal of the vice-president.
- (d) Approval of ordinances issued by the President.

62. With respect to the "Morley Minto Reforms", consider the following statements:

- 1. Separate electorates for the Muslims for election to the Central Council.
- 2. The Legislative Councils could reject the budget, but the Governor could restore it.
- 3. The elective principle was recognised for the non-official membership of the Councils in India.
- 4. One Indian was to be appointed to the Viceroy's Executive Council.

Which of the statements given above are correct?

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

63. Which of the following directions was/were given by M.K. Gandhi during the Civil Disobedience Movement for future action?

- 1. Foreign liquor and cloth shops can be picketed.

2. Lawyers can give up practice.
3. Government servants can resign from their posts.

Select the correct answer using the code given below:

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

64. Which of the following were observed during the Swadeshi Movement?

1. Tying of Raksha Bandhan
2. Farmers took to no-paying of land revenue
3. Boycott of imported clothes
4. Increase in industrial unrest
5. Promotion of domestic manufacturing

Select the correct answer using the code given below:

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

65. Consider the following statements with reference to tropical cyclonic formations:

1. Most of the tropical cyclone's formations take place between 20 degrees North and 20 degrees south of the globe.
2. There is an absence of tropical cyclones in the South Atlantic and the Eastern South Pacific Oceans.
3. There are two distinct seasons of tropical cyclones in the North Indian Ocean.

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) 1, 2 and 3

66. Consider the following statements:

1. When the crop is sown on a piece of land for twice, the area is counted twice in Gross Cropped Area whereas, it is counted only once in net area sown.
2. The Gross Cropped Area has increased during the last two decades whereas the net area sown has been remaining largely

unchanged.

Which of the above statements is/are correct?

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

67. Which of the following suitable conditions are required for Tea cultivation?

1. Moderate temperature with high rainfall
2. Acidic Soil
3. Strong sunlight
4. Mountain slopes

Select the correct answer using the codes given below:

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

68. Which of the following are most likely impacts of Devaluation of Rupee on Indian economy?

1. Increase in Exports
2. Drastic increase in GDP growth rate
3. Imports become costlier
4. Beneficial to the remittance receivers

Select the correct answer using the code given below:

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

69. Which of the following can be patented under the "Trade-Related Aspects of Intellectual Property Rights (TRIPS)"?

1. Copyrights
2. Layout Design of Integrated Circuits
3. Traditional Knowledge

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

70. Which of the following are the possible impacts of Invasive species?

1. Increase in biodiversity
2. The decrease in endemic Species

3. Degradation of marine and freshwater ecosystems

4. Increase in crop and stock yields

Select the correct answer using the code given below:

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

71. Which of the following measures has/have been taken in India for Wildlife Conservation?

1. A Global Tiger Forum of Tiger Range Countries has been created for addressing international issues related to tiger conservation.
2. Financial and technical assistance are provided to the State Governments under the 'Project Tiger' and 'Project Elephant'.
3. The Wildlife Crime Control Bureau has been set up to strengthen the enforcement of law for control of poaching and illegal trade in wildlife and its products.

Select the correct answer using the code given below:

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

72. Which of the following statements is/are correct about the recent developments in the field of nanotechnology in India?

1. A new advancement by CIFT has shown that nanocoating of high-density polyethylene webbings with polyaniline and copper nano-particles can prevent biofouling.
2. The Indian Institute of Technology (IIT), Guwahati has established advanced microelectronics and nano energy facilities at its Centre for Nanotechnology which is the first-of-its-kind in the Northeastern part of India.
3. The first five-year program for nano research called 'Nano-mission' was launched in the year 2012 with an allocation of funding of USD 250 million.

Select the correct answer using the following code:

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

73. The Union Government has introduced the Election Laws (Amendment) Bill, 2021, as part of the electoral reforms. Which of the following is/are the part(s) of such reforms?

1. Verification of the name of a person in the Electoral Rolls by matching the details with the person's Aadhaar Number.
2. Non-furnishing of the Aadhaar Number by the person shall result in permanent deletion of his/her name from the Electoral Rolls.
3. Provision of 4 qualifying dates in one month for the registration of new names in the Electoral Rolls.
4. Gender neutral provisions for the spouse of the person having service qualifications.

Select the correct answer using the code given below:

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

74. Kodavali Buddhist site 'recently in news' is located in which of the following states?

- (a) Uttar Pradesh
- (b) Karnataka
- (c) Andhra Pradesh
- (d) Bihar

75. Consider the following statements with reference to the Union Territories of India:

1. The Supreme Court can establish a high court for a union territory or put it under the jurisdiction of the high court of adjacent state.
2. The Constitution does not contain any separate provisions for the administration of acquired territories.

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

76. Consider the following statements with reference to minimum age of marriage for Women in India:

1. The government has recently revised the minimum age of marriage for women from 18 to 21 years.
2. The minimum age of marriage is prescribed through the Prohibition of Child Marriage Act, 2006.
3. As per National Family Health Survey-5, nearly one-fourth of girls continue to get married below the age of 18 years.

Which of the above given statements is/are correct?

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

77. Consider the following statements with reference to the Committee of parliament on official languages:

1. The Official Languages Act (1963) provided for the setting up of a Committee of Parliament on Official Language.
2. The Constituent Assembly made a provision to constitute a Committee of Parliament on Official Language.
3. The Secretariat of the Committee is headed by the Secretary of the ministry of home affairs.

Which of the statements given above is/are correct?

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

78. With regard to second Anglo-Maratha war, which of the following statements is/are correct?

1. It was fought between the British East India Company and the united confederacy of Maratha chiefs of the Peshwas, Gaekwads, Holkars, Scindias and Bhonsle.
2. It came to an end with the defeat of Holkars and signing the Treaty of Rajpurghat.
3. This war helped British to gain control over

a large part of Central India.

Select the correct answer using the code given below:

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

79. Consider the following statements regarding the Policy of Ring Fence.

1. This policy was enacted by Governor General Warren Hasting.
2. The British treated native rulers as subordinates while applying this policy.
3. The policy of annexation was abandoned to create buffer states.

Which of the statements given above is/are correct?

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

80. With reference to the major causes that resulted in the Revolt of 1857, consider the following statements:

1. The discontent and disaffection among the dispossessed ruling families and their successors.
2. The vigorous application of the policies of Subsidiary Alliance and Doctrine of Lapse.
3. Prevalence of the rampant corruption in the Company's administration.
4. The Indian sepoys were discriminated against his British counterpart in matters of promotion and privileges.

Which of the statements given above is/are correct?

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

81. Consider the following statements regarding Frost Wedging:

1. It is a mechanical disintegration of rock by the pressure of water freezing in cracks, crevices, pores, and joints.
2. It does not occur in very cold areas because the process of thawing is infrequent.

Which of the statement(s) given above is/are incorrect?

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

82. Consider the following statements regarding drainage system:

- 1. Himalayan rivers are example of consequent drainage while peninsular rivers are example of antecedent drainage.
- 2. Meander formation is more common in Himalayan Rivers while Peninsular Rivers generally run in straight course.

Which of the above statements are correct?

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

83. Consider the following statements, with regard to Western disturbances:

- 1. Western disturbances are characterized by cloudy night sky and decreased temperatures.
- 2. Precipitation during the winter season has great importance in agriculture particularly for Rabi crops.

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

84. Which of the following is/ are the reasons for decline in railways' share in transportation of surface freight since independence?

- 1. Non-Competitive Tariffs
- 2. Small fleet size
- 3. Slow speeds
- 4. Poor last mile connectivity

Select the correct answer using the code given below:

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

85. Recently, Indian parliament passed the Insurance Amendment Bill 2021 to increase the foreign direct investment (FDI) limit in the insurance sector to 74% from 49%. Which among the following will be the possible consequences of this increase in FDI limits in the Insurance sector in India?

- 1. Easy access to foreign capital to meet the growth requirements.
- 2. Increase in insurance penetration in India.
- 3. Job losses in the insurance sector.
- 4. Better pricing of insurance products.

Which of the statements given above is/are correct?

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

86. Consider the following description:

It is the second largest employment generator in the country. It has close linkages with agriculture and the ancient culture and traditions of the country. It contributes roughly 2% to the GDP of India. Recently for its promotion, PM-MITRA scheme has been launched.

Which of the following Industry has been described in the above paragraph?

- (a) Textile Industry
- (b) Construction Industry
- (c) Tourism and Hospitality Industry
- (d) Gems and Jewelry Industry

87. Which of the following statements regarding the catalytic converters is/are correct?

- 1. Catalytic converters use platinum, palladium and rhodium as the catalysts.
- 2. It converts unburnt hydrocarbons into carbon dioxide and nitrogen gas.
- 3. Motor vehicles equipped with catalytic converter should use leaded petrol.

Select the correct answer using the code given below:

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

88. Consider the following statements regarding productivity in an ecosystem:

1. Net Primary Productivity is the rate production of organic matter during photosynthesis.
2. Gross Primary Productivity is the available biomass for consumption by heterotrophs.

Which of the above statements is/are incorrect?

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

89. Nitrogen deficiency can be prevented by using organic methods which requires time, but it result in a more even distribution of the added nitrogen over time. Which of the following organic methods are used for adding nitrogen to the soil?

1. Adding composted manure to the soil
2. Planting a green manure crop, such as borage
3. Planting nitrogen fixing plants like peas or beans
4. Adding coffee grounds to the soil
5. Adding Nitrogen as a Plant Fertilizer

Select the correct option using the codes given below:

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

90. Which of the following statement is correct about Edge Computing?

1. The most important benefit of edge computing is its ability to increase network performance by reducing latency.
2. Any single disruption in the network will take down the entire network in Edge computing
3. Edge computing can manage massive amounts of data generated by Internet of Things (IoT) devices and other devices by storing and processing data locally.

Select the correct statement using the code given below:

- (a) 1 and 2 only

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

91. Consider the following statements:

1. Cartosat satellites are earth observation satellites, used mainly for large-scale mapping of the Earth through high resolution cameras
2. Geostationary orbit is a circular orbit 35,786 km above Earth's equator and follows the direction of Earth's rotation.
3. SAARC satellite project has the participation of all the SAARC member countries.

Which of the above statement/s is/are correct?

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

92. Which of the following countries share border with Ukraine?

1. Belarus
2. Georgia
3. Moldova
4. Hungary

Select the correct answer using the code given below:

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

93. With reference to the "Blockchain Technology" consider the following statements:

1. It is a public ledger that everyone can inspect, but which no single user controls.
2. The overall carbon footprint of crypto currencies is comparable to that of a few megacities, and mining assets is energy-inefficient and unsustainable.
3. The value of the crypto assets is determined by their ability to be swapped for other currencies.

Which of the statements given above is/are correct?

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

(d) 1, 2 and 3

94. Consider the following statements with reference to the Specification of Classes:

1. The Constitution specifies the castes or tribes which are to be called the SCs or the STs and Other Backward Classes (OBCs).
2. President issues orders specifying the SCs and STs in different states and union territories.
3. Any inclusion in or exclusion from the Central List of SC/ST specified can be done by the President only.

Which of the statements given above is/are correct?

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

95. With reference to the practice of begging in India, consider the following statements.

1. It is a subject matter which comes under the concurrent list of the Constitution.
2. It is banned under various state laws which are modified version of a central law enacted by the parliament.
3. A child being forced to beg is an offence under the Juvenile Justice Act.

Which of the statements given above is/are correct?

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

96. With reference to the proclamation of the national emergency in India, consider the following statements.

1. The First national emergency was proclaimed in wake of Indo-Pakistan War of 1965.
2. The National Emergency of 1975 was proclaimed on the ground of internal disturbances.
3. The Bihar Movement was a peaceful protest launched by the opposition parties after the National Emergency of 1975 was declared.

Which of the statements given above is/are

correct?

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

97. Which of the following statements is/are correct regarding the Battle of Wandiwash?

1. Dupleix played a decisive role in the Battle of Wandiwash.
2. This battle left the English East India Company with no European rival in India.
3. Indian natives joined the English army and not the French.

Select the correct answer using the code given below:

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

98. Consider the following statements regarding Indian Councils Act of 1861

1. It made a beginning of the representative institutions by associating Indians with the law-making process.
2. It initiated the process of centralization by reducing the legislative powers to the Bombay and Madras Presidencies.
3. It also gave recognition to the 'portfolio' system, introduced by Lord Canning.

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) 1, 2 and 3

99. Consider the following statements regarding the structure and criteria for designation of a Biosphere Reserve:

1. Research and educational activities can be allowed in the buffer zone of a Biosphere Reserve.
2. The transition area is the outermost part of a biosphere reserve and is usually not delimited.
3. The core area must be typical of a biogeographical unit and large enough to sustain viable populations representing all

trophic levels in the ecosystem.

Which of the above statements are correct?

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

100. Which of the following is/are the possible impacts of ocean acidification?

1. Shallowing of Carbonate Compensation Depth (CCD)
2. Increase in oceans' capacity to absorb carbon dioxide
3. Thickening of shells in marine organisms

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