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Test Booklet Series

TEST BOOKLET

C

GENERAL STUDIES (P) 2024 – Test – 4145

Time Allowed: Two Hours

Maximum Marks: 200

INSTRUCTIONS

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS BOOKLET DOES **NOT** HAVE ANY UNPRINTED OR TURN OR MISSING PAGES OR ITEMS, ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.
2. ENCODE CLEARLY THE TEST BOOKLET SERIES **A, B, C** OR **D** AS THE CASE MAY BE IN THE APPROPRIATE PLACE IN THE ANSWER SHEET.
3. You have to enter your Roll Number on the Test Booklet in the Box provided alongside. **Do NOT** write anything else on the Test Booklet.
4. This Test Booklet contains **100** items (Questions). Each item is printed in **English**. Each item 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 with you consider the best. In any case, choose **ONLY ONE** response for each item.
5. You have to mark all your responses **ONLY** on the separate Answer Sheet provided. See direction in the answers sheet.
6. All items carry equal marks. Attempt all items. Your total marks will depend only on the number of **correct responses** marked by you in the answer sheet. For **every incorrect** response **1/3rd of the allotted marks** will be deducted.
7. Before you proceed to mark in the Answer sheet the response to various items in the Test booklet, you have to fill in some particulars in the answer sheets as per instruction sent to you with your Admission Certificate.
8. After you have completed filling in all responses on the answer sheet and the examination has concluded, you should hand over to Invigilator only the answer sheet. You are permitted to take away with you the Test Booklet.
9. Sheet for rough work are appended in the Test Booklet at the end.

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE ASKED TO DO SO

1. Consider the following statements regarding the Madden-Julian Oscillation:

1. It is an equatorial westward moving disturbance of clouds, rainfall, winds, and pressure.
2. It is observed mainly over the Atlantic Ocean.

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

2. Which of the following statements best describes the process of vernalization in ecology?

- (a) It is the induction of the flowering process of the plant by exposure to the long periods of cold winter or such conditions.
- (b) It is the process by which plants die to growing in low-light conditions.
- (c) It is the mechanism by which plants regulate their water intake during dry periods.
- (d) It is a process of asexual reproduction in which plants reproduce through structures other than flowers and seeds.

3. Recently, India was re-elected to the Council of the International Maritime Organization (IMO). In this context, consider the following statements:

1. International Maritime Organization is a specialized agency of the United Nations.
2. India was elected among ten states with the largest interest in providing international shipping services.
3. India has the distinction of being a member of the IMO council continuously since 1959.

How many statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

4. Consider the following statements regarding productivity in ecology:

1. Oceans contribute a higher share in annual net primary productivity of the whole biosphere than land.
2. Secondary productivity is defined as the rate at which consumers convert the organic matter into new biomass.

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

5. Consider the following statements regarding the Thorium mineral used for production of nuclear energy:

1. It is extracted from monazite ore.
2. It is mainly extracted from Narmada-Tapti river basin.
3. Chevara in Kerala is famous for Thorium deposits.

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

6. Consider the following statements regarding the Global Partnership on Artificial Intelligence (GPAI):

1. It is a multistakeholder initiative to guide the responsible development and use of artificial intelligence
2. Its secretariat is hosted by the Organisation for Economic Co-operation and Development.
3. The first GPAI summit in 2023 was hosted by India.

How many statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

7. Which of the following biogeochemical cycles lacks a significant component in the atmosphere?

- (a) Carbon Cycle
- (b) Phosphorus Cycle
- (c) Nitrogen Cycle
- (d) Sulphur Cycle

8. Consider the following statements regarding the Ethics Committees of the Parliament which was in the news recently:

1. Its origins lie in the report of the National Commission to Review the Working of the Constitution.
2. Any person may directly complain against a member of parliament to the ethics committee.

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

9. Consider the following statements regarding Anthrax disease:

1. Anthrax is caused by gram-positive bacteria.
2. Humans can catch anthrax when they come in contact with infected animals.
3. Currently, there is no treatment available for Anthrax.

How many statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

10. Which island in the Andaman and Nicobar group is known for its limestone caves and mud volcanoes?

- (a) Little Andaman
- (b) Baratang
- (c) Barren Island
- (d) Great Nicobar

11. In geological terms, the concept of Isostasy refers to
- (a) The study of seismic activity and earthquake patterns.
 - (b) The equilibrium in the Earth's crust, where lighter masses float on denser materials.
 - (c) The process of erosion and sedimentation in river valleys.
 - (d) The formation and movement of tectonic plates beneath the Earth's surface.

12. Consider the following rivers :

1. Hemavati
2. Kabani
3. Indravati

How many of the rivers given above are the tributaries of the Cauvery River?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

13. Radiative forcing is a measure of the influence a factor has in altering the balance of incoming and outgoing energy in the Earth's atmosphere. In this context, consider the following gases:

1. Carbon dioxide
2. Methane
3. Tropospheric Ozone
4. Sulfate aerosols

How many of the above given gases are considered to be positive radiative forcing in climate change?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

14. Arrange the following from North to South:

1. Gulf of Bothnia
2. Gulf of California
3. Gulf of Carpentaria

Select the correct answer using the code given below.

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

15. Which of the following rivers does *not* drain into the Arabian Sea?

- (a) Zuari
- (b) Sharavati
- (c) Vaigai
- (d) Bharathappuzha

16. Consider the following statements regarding alternative fuels:

1. Diesohol is an alternative fuel which is a blend between diesel and ethanol.
2. A comprehensive study of ethanol blended fuel E27 was recently launched by Hindustan Petroleum Corporation Limited (HPCL).

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. Per- and polyfluoroalkyl substances (PFAS) are also known as forever chemicals. In this context, consider the following statements:

1. They are a large, naturally occurring chemical family which can be produced synthetically.
2. They are used to make fluoropolymer coatings and products that resist heat, oil, stains, grease, and water
3. They can be found in human blood too because of their wide use.

Which of the statements given above is/are correct?

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

18. The Coalition for Disaster Resilient Infrastructure released the first-ever biennial report to lay down the political and economic ground for the need to invest in disaster-resilient infrastructure. In this context, consider the following statements regarding the Coalition for Disaster Resilient Infrastructure (CDRI):

1. It is a United Nations organization aiming to promote the resilience of new and existing infrastructure.
2. It was launched during the UN Climate Action Summit in 2019.

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

19. With reference to rare earth metals, consider the following statements:

1. Rare earths are 15 elements referred to in the lanthanide and Actinide series of the periodic table of elements.
2. India does not have industrial-scale intermediate facilities for the use of rare earth metals in alloys.
3. The Indian resource only contains Light Rare Earth Elements (LREE) in extractable quantities.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

20. In the context of the origin and evolution of the earth, "The Big Splat" event is associated with?

- (a) The collision between Earth and a Mars-sized body, leading to the formation of the Moon.
- (b) The sudden eruption of large volcanic masses shaping the Earth's surface.
- (c) The impact of a comet, causing mass extinction events.
- (d) The gravitational interaction between Earth and a passing asteroid.

21. Consider the following statements:

1. Uttar Pradesh does not have a border with Chhattisgarh.
2. Only three Indian states have a border with Pakistan.
3. The Tropic of Cancer does not pass through Manipur.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

- 22.** With reference to Lithium resources, consider the following statements:
1. The lithium triangle includes Argentina, Chile, and Bolivia.
 2. Recently, the Geological Survey of India discovered lithium reserves in the Reasi district of Jammu and Kashmir.
 3. ONGC Videsh, is responsible for securing lithium blocks overseas.
- How many of the statements given above is/are correct?
- (a) Only one
(b) Only two
(c) All three
(d) None
- 23.** Consider the following statements with respect to the World Migration Report:
1. Since 2000, the International Organization for Migration has been publishing it every year.
 2. World Migration Report 2022 is only available online.
- Which of the following statements is/are correct?
- (a) 1 Only
(b) 2 Only
(c) Both 1 and 2
(d) Neither 1 nor 2
- 24.** Consider the following conventions/protocols:
1. United Nations Convention on Biological Diversity
 2. Stockholm Convention on Persistent Organic Pollutants
 3. United Nations Convention to Combat Desertification
 4. Montreal Protocol
- How many of the mentioned above have Global Environment Facility as their formal financial mechanisms?
- (a) Only one
(b) Only two
(c) Only three
(d) All four

- 25.** With reference to the population and its density, consider the following statements:
1. Physiological density refers to the ratio of the total population of an area and the net cultivated area.
 2. The Agricultural population of an area includes the agricultural labourers as well as their family members.
- 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
- 26.** Consider the following statements regarding Global Biofuel Alliance (GBA):
1. It is an India-led initiative to create a favourable ecosystem for promoting development and deployment of biofuels.
 2. It was formally launched on the sidelines of the G20 Summit in New Delhi.
- 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
- 27.** Consider the following lakes in India:
1. Pachpadra Lake
 2. Tso Kar
 3. Kailveli Lake
- How many of the above lakes are freshwater lakes?
- (a) Only one
(b) Only two
(c) All three
(d) None

- 28.** Consider the following statements regarding Nonylphenol, sometimes seen in the news:
1. It is a toxic bio-accumulate that is present in detergents.
 2. It is an endocrine disruptor in humans and can create reproductive defects in rodents.
 3. United Nations Environment Programme has designated it as a chemical of global concern.
 4. The Bureau of Indian Standards regulates the amount of Nonylphenols in drinking water.
- How many statements given above are correct?
- (a) Only one
 - (b) Only two
 - (c) Only three
 - (d) All four
- 29.** Phytoplanktons are primarily found in which of the following zones of a lake?
- (a) Littoral zone
 - (b) Benthic zone
 - (c) Limnetic zone
 - (d) Profundal zone
- 30.** Which of the following is used to describe the chemical interactions between plants that can have either beneficial or harmful effects?
- (a) Mutualism
 - (b) Commensalism
 - (c) Allelopathy
 - (d) Symbiosis
- 31.** Which of the following could be termed secondary activities?
1. Retail sales
 2. Textile
 3. Shipbuilding
 4. Tourism
 5. Energy utilities
- Select the correct answer using the code given below.
- (a) 1 and 4 only
 - (b) 2, 3 and 5 only
 - (c) 1, 2 and 4 only
 - (d) 1, 2, 3, 4 and 5
- 32.** The term 'JT-60SA', which was recently seen in the news, is related to:
- (a) The Japanese space mission to the sun
 - (b) Genetically modified millet variety developed in India
 - (c) Biofuel produced using jute crop
 - (d) Experimental nuclear fusion reactor
- 33.** 'Aboriginal and Torres Strait Islander Voice', recently seen in the news, is related to:
- (a) a movement in the Nordic countries for economic demands
 - (b) an organization for the protection of human rights in the states of the east coast of the USA
 - (c) a referendum conducted in Australia to recognize the first people of Australia under its constitution
 - (d) a movement in Caribbean islands by aboriginals for democratic rights.
- 34.** Which of the following organizations recently launched the INFUSE mission to study a supernova event remnant that took place 20,000 years ago?
- (a) European Space Agency
 - (b) Japan Aerospace Exploration Agency
 - (c) Indian Space Research Organization
 - (d) National Aeronautics and Space Administration
- 35.** Which of the following best describes the concept of "Ecotype"?
- (a) A group of organisms that share a similar role in an ecosystem, regardless of their taxonomic affiliation.
 - (b) A genetically distinct population of a species that is adapted to a specific environment.
 - (c) A taxonomic classification of organisms based on their physical characteristics.
 - (d) A measure of the diversity of species within a particular ecosystem.

36. Consider the following statements regarding Harmful Algal Blooms (HABs):

1. Algal blooms are toxic in nature because presence of algae is unhealthy for aquatic ecosystems.
2. HABs occur only in the freshwater ecosystems.
3. They kill fishes in the ecosystem by causing oxygen depletion.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

37. Consider the following statements regarding underwater noise emissions:

1. Marine sound pollution is caused by shipping, oil and gas exploration and military sonar.
2. Masking is a process where the external noise overlaps with marine species communication sound which hampers navigational skills of these species.
3. India currently has no mechanism to measure underwater noise emissions.
4. The National policy for Blue Economy aims to tackle underwater noise pollution.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

38. Consider the following pairs:

<i>Glaciers</i>	<i>Location</i>
1. Thwaites Glacier	: Antarctica
2. The Steenstrup Glacier	: Greenland
3. Schlatenkees	: Austria

How many pairs given above are correctly matched?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

39. Consider the following statements regarding the scheme for "Development of Solar Parks and Ultra Mega Power Projects":

1. Under the scheme, the Government of India has currently sanctioned 50 solar parks across all the states.
2. Solar Energy Corporation of India (SECI) acts as a nodal agency for the scheme.
3. Recently, the targets for the scheme were achieved well before the expected deadline of 2026.

How many statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

40. Consider the following statements with respect to Noise Pollution (Regulation and Control) Rules, 2000:

1. These rules are prescribed under the purview of the Air (Prevention and Control of Pollution) Act, 1981.
2. Noise emanating from industry is regulated by the Central Pollution Control Board.
3. Loudspeakers can be used throughout the night in closed premises like community halls and banquet halls.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

41. Which of the following best describes the concept of "Trophic cascade"?

- (a) A sudden and dramatic increase in the population of a particular species
- (b) A series of indirect ecological effects that result from the removal or addition of a predator or prey species
- (c) A type of biological control that uses predators to control pest populations
- (d) A measure of the efficiency of energy transfer through a food web

42. Which of the following bodies have been formed under Wildlife (Protection) Act, 1972?

1. National Board for Wildlife
2. Central Zoo Authority
3. National Tiger Conservation Authority
4. Wildlife Crime Control Bureau

Select the correct answer using the code given below.

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

43. With reference to the Pacific decadal oscillation (PDO), consider the following statements:

1. PDO is a naturally occurring short - term phenomenon with each phase lasting around 6 to 12 months.
2. During the positive phase, the eastern North Pacific tends to be warmer than average, while during the negative phase, it tends to be cooler than average.
3. Positive phase of PDO tends to be associated with more rapid global warming while the negative phase is linked to slow global warming.
4. During the positive phase of the PDO in wintertime much of Asia is usually cooler than normal, with above normal temperatures over India.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

44. Article 99, a rarely used provision of the United Nations Charter was invoked by the UN Secretary General in the context of:

- (a) hostilities in Gaza and Israel.
- (b) Russia-Ukraine conflict.
- (c) increasing hold of ISIS in employing youth in terrorism.
- (d) China's growing influence in Pakistan.

45. Which of the following best describes 'Torrefaction technology' ?

- (a) It refers to conversion of biomass into green hydrogen.
- (b) It refers to gasification of coal to produce a synthetic gas made from carbon monoxide and hydrogen.
- (c) It refers to conversion of biomass into coal-like pellets.
- (d) It refers to thermal depolymerization of organic matter in the presence of nitrogen or absence of oxygen.

- 46.** Consider the following:
1. Dominance of phytoplankton and algae
 2. Damage to the coral reefs
 3. Sea bottom hypoxia
- How many of the above are the impacts of eutrophication?
- (a) Only one
(b) Only two
(c) All three
(d) None
- 47.** Consider the following cities:
1. Lucknow
 2. Bhopal
 3. Bengaluru
- How many of the above cities are located to the west of the Standard Meridian of India?
- (a) Only one
(b) Only two
(c) All three
(d) None
- 48.** Consider the following environmental act:
1. Wild life (Protection) Act, 1972
 2. The Public Liability Insurance Act, 1991
 3. The Water (Prevention and Control of Pollution) Cess Act, 1977
 4. The Water (Prevention and Control of Pollution) Act, 1974
- How many of the above statutes mentioned in the Schedule I of the National Green Tribunal Act, 2010 ?
- (a) Only one
(b) Only two
(c) Only three
(d) All four

- 49.** Consider the following statements regarding Renewable Purchase Obligations (RPOs) used in India:
1. RPOs are mandatory under the Environmental (Protection) Act, 1986.
 2. Both captive power producers and discoms may be considered as obligated entities.
- 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
- 50.** Chief Economists Outlook report is published by
- (a) World Economic Forum (WEF)
(b) The International Monetary Fund (IMF)
(c) The Organization for Economic Cooperation and Development (OECD)
(d) World Bank
- 51.** Consider the following statements:
- Statement-1: Alternate stripes of positive and negative magnetic anomalies are found on either side of the mid-oceanic ridges.
- Statement 2: Earth experiences a temporal reversal in the geocentric dipole magnetic field.
- Which one of the following is correct in respect of the above statements?
- (a) Both Statements-1 and Statement-2 are correct and Statement-2 is the correct explanation for Statement-1
(b) Both Statement-1 and Statement-2 are correct and Statement-2 is not the correct explanation for Statement-1
(c) Statement-1 is correct but Statement-2 is incorrect
(d) Statement-2 is incorrect but Statement-1 is correct

52. Consider the following factors:
1. The introduction of a new species to the ecosystem
 2. Changes in environmental conditions, such as temperature or precipitation
 3. The removal of a key species from the ecosystem

How many of the above can significantly impact the stability of a food chain?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

53. Consider the following statements with respect to the United Nations Population Fund:

1. Its goal is to end child marriage and female genital mutilation by 2030.
2. Its funding is supported by the United Nations regular budget.
3. The UN Economic and Social Council (ECOSOC) establishes its mandate.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

54. Consider the following statements regarding the SDG Agrifood Accelerator Programme:

1. It is an initiative by the World Food Program and is supported by the SEED initiative.
2. It supports small enterprises from developing countries pioneering solutions to transform agrifood systems through enhancing environmental protections.

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 statements regarding Soil Respiration:

1. Soil respiration is a measure of the carbon dioxide (CO₂) released from soil as a result of decomposition of soil organic matter (SOM) and plant litter by soil microbes.
2. The rate of soil respiration increases with increase in ambient temperature and decrease with decrease in ambient temperature.

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

56. Consider the following pairs:

<i>Tribes</i>	<i>Region/Country</i>
---------------	-----------------------

- | | |
|----------------|----------------|
| 1. Tuareg | : North Africa |
| 2. Ayoreo | : Paraguay |
| 3. Kawahiva | : Brazil |
| 4. Sentinelese | : India |

How many pairs given above are correctly matched?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

57. India has been unanimously elected as a member representing the Asian region in the executive committee of the Codex Alimentarius Commission (CAC). In this context, consider the following statements regarding the CAC:

1. It is an international food standard and code of practice contributing to safe international food trade.
2. It was created by the Food and Agriculture Organization and the World Trade Organization.

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

58. Consider the following statements regarding tropical dry evergreen forests of India:

1. They occur predominantly along the Gujarat coast.
2. The chief characteristics of these forests are short-statured trees.
3. Bamboo is grown extensively in these forests.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

59. Consider the following statements regarding GWP100:

1. It is an internationally accepted emission accounting standard used by countries.
2. It is suited to measure the impact of short-lived greenhouse gases.

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

60. Consider the following factors of migration:

1. Lack of employment opportunities
2. Frequent droughts
3. Better access to healthcare
4. Small size of land holdings

Which of the above will fall under the category of 'push factors' of migration from rural to urban areas?

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

61. Which of the following can be considered as a factor of an Allogenic succession?

- (a) The increase in soil fertility due to the decomposition of organic matter
- (b) The competition between different plant species for sunlight.
- (c) The exponential changes in species composition due to competitive interactions
- (d) The introduction of a new species that prey on native species.

62. Consider the following statements:

1. Volcanic eruptions can cause the ozone hole to expand.
2. Ozone Depleting Substances (ODS) are human-made chemicals containing chlorine and bromine.
3. Stratospheric aerosol injection is scientifically proven to reduce ozone depletion.

How many statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

63. Which of the following groups of animals represents a "Guild in a community"?
- Lions, zebras, and gazelles
 - Bees, Butterflies, and American Humming Bird
 - Desert Sparrow, Butterfly, and Ants
 - Polar Bears, Penguins, and Seals

64. Consider the following:
- Inefficient grazing strategies
 - Low turnover rate of phytoplankton
 - Long food chains
- How many of the above are reasons for the Inverted Pyramid Of Biomass in Oceans?
- Only one
 - Only two
 - All three
 - None

65. Consider the following pairs:
- | <i>Resources</i> | <i>Region</i> |
|------------------|-------------------|
| 1. Oil | : Sahara Desert |
| 2. Diamonds | : Atacama Desert |
| 3. Caliche | : Kalahari Desert |
- Which of the pairs given above is/are correctly matched?
- 1 only
 - 2 and 3 only
 - 1, 2 and 3
 - 3 only

66. Consider the following pairs:
- | <i>Volcanic belt</i> | <i>Cause for eruption</i> |
|-------------------------|---|
| 1. Circum Pacific Belt | : Collision of Indian and Pacific Plate |
| 2. Mid continental belt | : Convergence of Eurasian and African, Indian plate |
| 3. Mid Atlantic belt | : Splitting of Atlantic plate |
- How many of the above pairs are correctly matched?
- Only one
 - Only two
 - All three
 - None

67. Consider the following:
- | <i>River Island</i> | <i>Associated River</i> |
|---------------------|-------------------------|
| 1. Bhavani Island | : Godavari |
| 2. Umananda Island | : Brahmaputra |
| 3. Nongkhnum | : Shyok |
- How many of the above are correctly matched?
- Only one
 - Only two
 - All three
 - None

68. Consider the following railway sites:
- Darjeeling Himalayan Railway
 - Nilgiri Mountain Railway
 - Kalka Shimla Railway
 - Chhatrapati Shivaji Terminus, Mumbai
 - Matheran Light Railway
 - Kangra Valley Railway
- How many of the above sites are UNESCO-accorded World Heritage Sites?
- Only three
 - Only four
 - Only five
 - All six

69. Consider the following statements:
- Statement-I: Biological oxygen demand (BOD), is the amount of dissolved oxygen needed by aerobic biological organisms to break down organic material present in a given water body.
- Statement-II: The waterbody with low Biological oxygen demand (BOD) is considered highly polluted.
- Which one of the following is correct in respect of the above statements?
- Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I.
 - Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I.
 - Statement-I is correct but Statement-II is incorrect.
 - Statement-I is incorrect but Statement-II is correct.

70. Consider the following system with reference to the chemical composition of the earth:

1. The dominant minerals in the composition of the crust are feldspar and mica.
2. The upper part of the crust is composed of heavy silicate matter whereas light silicate dominates the lower part.
3. The core of the earth is composed of silica and magnesium.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

71. Consider the following statements:

1. Quinary activities focus on the creation, re-arrangement and interpretation of new and existing ideas while Quaternary activities focus on the collection, production and dissemination of information.
2. The services provided under the Quinary sector can not be completely outsourced whereas services involved in the Quaternary type of economy are outsourced in varied forms.

Which of the following statements is/are correct?

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

72. Consider the following statements with reference to 'Amaterasu particles' recently seen in news :

1. They are high energy particles with energy exceeding 240 EeV.
2. They are produced by the Large Hadron Collider, which is the most powerful accelerator ever built.

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

73. Which of the following statements best describes the roles of Anabolism and Catabolism in ecological processes?

- (a) Anabolism is the synthesis of complex organic compounds from simpler forms, while catabolism is the breakdown of complex organic compounds into simpler forms.
- (b) Anabolism refers to the process of breakdown, whereas catabolism refers to the process of growth.
- (c) Anabolism involves the conversion of solar energy into chemical energy, while catabolism is the release of stored energy through photosynthesis.
- (d) Anabolism is responsible for energy storage in ecosystems, while catabolism is the release of energy during the production of organic matter.

74. Which of the following best describes "Operation Chakra-2" recently seen in news?
- (a) It aimed to track down cyber criminals who indulge in financial crimes and fraud.
 - (b) It was launched to disrupt, degrade, and dismantle networks, with international linkages, involved in drug trafficking.
 - (c) It is related to fight against the sharing and dissemination of Child Sexual Abuse Material (CSAM) online.
 - (d) It aimed to reusing and recycling materials to minimize the consumption of natural resources and prevent waste generation.

75. Consider the following :

1. Competition
2. Predation
3. Mutualism

How many of the above can be classified as Density-Independent Limiting Factors in Terrestrial Ecosystems?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

76. Consider the following services provided by Ecosystem:

1. Recreation and Tourism
2. Production of Food
3. Carbon Sequestration
4. Maintenance of Genetic Diversity

How many of the above can be classified under "Supporting Services" provided by Ecosystem?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

77. Consider the following statements regarding the concept of Planetary boundaries:

1. It aims to define environmental limits within which humanity can safely operate.
2. The nine planetary boundaries are identified and defined by the Intergovernmental Panel on Climate Change in 2007.
3. Novel entities such as organic pollutants and microplastics form part of planetary boundaries.
4. Recently, it was established that all the planetary boundaries have been breached for the first time.

How many statements given above are correct?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

78. Which of the following statements is **not** correct regarding the PM-Vishwakarma scheme?

- (a) It is launched by Ministry of Micro, Small and Medium Enterprises.
- (b) It recognizes artisans and craftsmen through PM Vishwakarma Certificate.
- (c) Only one member per family can avail benefits of the scheme.
- (d) The minimum age of the beneficiary should be 14 years.

79. Consider the following statements:

1. India is the third largest Electronic waste producer in the world.
2. India processed more than 50% of e-waste it generated in FY 2021-22.

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

80. Consider the following landforms:

1. Stack
2. Chasm
3. Notch
4. Chimney
5. Shingle
6. Spit
7. Tombolo

How many of the above-mentioned are sea waves and coastal landforms?

- (a) Only four
- (b) Only five
- (c) Only six
- (d) All seven

81. Consider the following statements:

Statement 1: The content of water vapour increases from the equator to poleward and the content of vapour increases upward.

Statement II: The content of water vapour depends on the temperature.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I
- (b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
- (c) Statement-I is correct but Statement-II is incorrect
- (d) Statement-I is incorrect but Statement-II is correct

82. Consider the following statements regarding particulate matter and its impact on health and the environment:

1. Particulate matter can cause both atmosphere cooling and warming.
2. Particulate matter can build anti-microbial resistance.
3. Plant growth inhibition and yield loss are possible due to metal particulate matter.
4. Maternal exposure to particulate air pollution during pregnancy may lead to abnormally higher newborn birthweight.

How many statements given above are correct?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

83. Consider the following statements regarding the International Classification of Diseases:

1. It originated in the post-covid global efforts to tackle pandemics.
2. It provides critical knowledge on the extent, causes and consequences of human disease and death worldwide.
3. It is maintained by the World Health Organization.

How many statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

84. Consider the following statements regarding sand and dust storms create due to climate change:

1. According to UNCCD, human activities cause more than 75% of the sand and dust storms across the globe.
2. In central Asia, shrinking of Aral sea and creation of Aralkum desert is one of the major sources of sand and dust storms.

Which of the above statements is/are correct?

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

85. Recently, the State government of Gujarat banned plantation of this tree. It is a flowering plant belonging to the family of Combretaceae. It is an invasive mangrove species. It has been used by various public authorities in India as landscaping for road medians, along roads, and in public gardens. This tree is famous for its dark green leaves color throughout the year and withstands harsh environmental conditions such as high and low temperatures.

Which of the following is best described in the passage given above?

- (a) *Prosopis juliflora*
- (b) *Acacia mangium*
- (c) *Lantana camara*
- (d) *Conocarpus erectus*

86. Mission 'Operation Storm Makers II' recently seen in the news is related to:

- (a) Israel's military mission in the Gaza Strip.
- (b) Humanitarian assistance mission by India.
- (c) INTERPOL led operation targeting human trafficking.
- (d) Military exercise between India-UAE.

87. Consider the following statements regarding Equatorial Evergreen Forest:

1. They have buttress roots to support the heavy and tall trees.
2. Vegetation is characterized by distinct vertical stratification.
3. The soil is very rich in nutrients and humus.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

88. Consider the following processes

1. Sedimentation
2. Decomposition
3. Weathering of rocks

How many of the above processes add carbon dioxide to carbon cycle?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

89. ISRO launched the ADITYA L-1 Mission to study the Sun's structure. In this context, arrange the various layers of the Sun from inner to outer layers:

1. Convective Zone
2. Radiative Zone
3. Photosphere
4. Corona
5. Chromosphere

Select the correct answer using the code given below.

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

- 90.** With reference to the submarine canyons, consider the following statements:
1. The course of subaerial canyons is usually sinuous, while that of submarine canyons is straight.
 2. The gradient of continental canyons is normally steeper than submarine canyons.
 3. The glacial canyons are more in number than the non-glacial submarine canyons.
- How many of the statements given above are correct?
- (a) Only one
(b) Only two
(c) All three
(d) None
- 91.** Consider the following conventions:
1. Basel Convention
 2. Bamako Convention
 3. Waigani Convention
- How many of the conventions mentioned above are related to waste management?
- (a) Only one
(b) Only two
(c) All three
(d) None
- 92.** 'Biotransformation', a new technology, recently seen in news, is related to:
- (a) Production of biodegradable variety of plastic
(b) Cost-effective production of biofuels
(c) Bioremediation technology used in metal waste reduction
(d) Technology to use stem cells in helping disabled people

- 93.** Consider the following statements regarding the Perform Achieve Trade (PAT) scheme:
1. It is a mechanism for improvements in energy efficiency of energy-intensive industries.
 2. Under the scheme, the central government notifies industries as 'designated consumers' which have to follow the energy restrictions.
 3. If a certain industry does not achieve the energy targets, it has to buy energy-saving certificates.
- How many of the statements given above are correct?
- (a) Only one
(b) Only two
(c) All three
(d) None
- 94.** Consider the following statements regarding the Global Cooling Pledge:
1. It is the initiative of the United Arab Emirates as the host of CoP 28 of the UNFCCC.
 2. It commits countries to reduce cooling-related emissions by at least 68% by 2050 compared to 2022 levels.
 3. India has signed this pledge.
- How many statements given above are correct?
- (a) Only one
(b) Only two
(c) All three
(d) None
- 95.** The 'State of Finance for Nature 2023' report was released by:
- (a) Global Environment Facility
(b) International Union for Conservation of Nature
(c) United Nations Environment Program
(d) Conservation International

96. Consider the following statements with reference to the Article 6A of the Citizenship Act (1955), recently seen in news:

1. It allows people who entered India between January 1, 1966, and March 25, 1971, and have been living in Assam to register themselves as citizens.
2. The section was inserted in the Citizenship Act in 2019.
3. Assam is the only state to have an exclusive cut-off date for citizenship against a common one for other states.

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

97. Consider the following passage:

These soils contain a larger proportion of sodium, potassium, and magnesium, and thus do not support much vegetative growth. They occur in arid and semi-arid regions and waterlogged and swampy areas. They lack nitrogen and calcium. These soils are widespread in western Gujarat, deltas of the eastern coast, and in Sunderban areas of West Bengal. They are also known as Usara soils.

Which of the following soil types is being described in the passage given above?

- (a) Peaty Soils
- (b) Saline soils
- (c) Red and Yellow Soil
- (d) Laterite soils

98. In which Himalayan region does the "Zabarwan Range" play a significant role in influencing the local climate?

- (a) Himachal Pradesh
- (b) Uttarakhand
- (c) Jammu and Kashmir
- (d) Sikkim

99. Which among the following factors responsible for growing cotton textile mills away from cotton producing areas?

1. Easy availability of cheap labour
2. Local investment
3. Development of hydroelectricity

Select the correct answer using the code given below.

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

100. Consider the following passage :

This plateau roughly forms a triangle based on the Vindhyan Hills, bounded by the Aravali Range in the west and a sharply defined scarp overlooking Bundelkhand in the east. It inherits a complex geology; scarcely any one of the peninsular groups is unrepresented here. This plateau has two systems of drainage; one towards the Arabian Sea and the other towards the Bay of Bengal. It is composed of extensive lava flow and is covered with black soil.

Which of the following plateaus is being described in the passage given above?

- (a) Malwa
- (b) Hazaribagh
- (c) Baghelkhand
- (d) Chotanagpur