

Q1: Which of the following species have been known to solve complex puzzles and mazes in laboratory settings?

- (a) Bees
- (b) Spiders
- (c) Ants
- (d) Octopuses

Q2. Which of the following species self-medicate by choosing specific plants that have medicinal properties to treat their illnesses?

- (a) Chimpanzees
- (b) Parrots
- (c) Wolves
- (d) Squirrels

Q3. The famous Serengeti protected area known for its large lion population and many large mammals is in which of the following countries?

- (a) Tanzania
- (b) Kenya
- (c) Peru
- (d) Botswana

Q4. Which of the following is known for mosaic of rivers, marshes and evergreen forests at the meeting point of two biogeographic regions, the Deccan Peninsula and the Eastern Ghats?

- (a) Sultanpur National Park
- (b) Manas National Park
- (c) Satkosia Tiger Reserve
- (d) Buxa Tiger Reserve

Q5. According to scientists what was the primary reason behind mass extinction of anaerobic organisms on planet earth about 2.3 billion years ago?

- (a) Asteroid impact
- (b) Intense volcanic eruption
- (c) Accumulation of oxygen in the atmosphere
- (d) Intense glacial period

Q6. How many of the following are primary producers?

- 1. Sea lettuce
- 2. Sea urchins
- 3. Seaweed
- 4. Seagrass
- 5. Sea kelp

Select the correct answer from the code given below.

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

Q7. Arrange the following in the correct order of decreasing number of recorded species belonging to the group on earth.

- (a) Insects>Vascular plants>Fishes>Mammals
- (b) Vascular plants>Insects>Fishes>Mammals
- (c) Insects>Vascular plants>Mammals>Fishes
- (d) Insects>Fishes >Vascular plants >Mammals

Q8. The Himalayas and the Western Ghats are two biodiversity hotspots each with a unique set of flora and fauna. Which of the following species can be found in both these regions?

- 1. Leopard
- 2. Elephant
- 3. Indian Python
- 4. Western Tragopan
- 5. Lion tailed macaque

Select the correct answer from the code given below.

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

Q9. Which of the following biogeographic zone of India cover the largest area?

- (a) Trans-Himalaya
- (b) Semi-arid
- (c) Northern Plain
- (d) Deccan Peninsula

Q10. Consider the following statements about biodiversity hotspots:

1. They are designated by a scientific survey done by IUCN and supported by UNEP.
  2. A site needs to have 1500 endemic vascular plants and mammal species to be designated as biodiversity hotspot.
- 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

Q11. Recently the Wild Life (Protection) Amendment Act, 2022 was passed to align it which of the international conventions?

- (a) Convention on biological diversity
- (b) United Nations Framework Convention on Climate Change
- (c) Convention on International Trade in Endangered Species of Wild Fauna and Flora
- (d) Convention on the Conservation of Migratory Species of Wild Animals

Q12. Which of the following national park located in Garo hills has endangered red panda population residing in it?

- (a) Keibul Lamjao National Park
- (b) Intanki National Park
- (c) Great Himalayan National Park
- (d) Nokrek National Park

Q13. Consider the following pairs of National park and geographical feature:

1. Sri Venkateswara National Park: Seshachalam hill
2. Manas National Park: Brahmaputra river
3. Valmiki National Park: Ganga river

How many of the above pairs are correctly matched?

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

Q14. How many of the following biosphere reserves in India are *not* part of UNESCO MAB programme?

1. Nanda Devi
2. Dibru-Saikhowa
3. Dehang-Dibang

Select the correct answer from the code given below.

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

Q15. Many scientific studies have concluded that Arctic is heating four times faster than the rest of the planet. Which of the following explains the reason behind the phenomena of Arctic amplification?

1. loss of sea ice and Ice-Albedo feedback
2. accelerated ozone depletion at arctic compared to rest of the planet

Select the correct answer from the code given below.

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

Q16. Which of the following is *not* correct about 'lapse rate feedback'?

- (a) Lapse rate feedback refers to the change in the atmospheric temperature gradient with altitude due to global warming.
- (b) Positive lapse rate feedback occurs when the upper atmosphere warms at a slower rate than the surface.
- (c) Negative lapse rate feedback occurs when the warming is greater at higher altitudes compared to the surface, increasing the lapse rate.
- (d) Even though lapse rate feedback affects climate sensitivity, it is independent of water vapor feedback.

Q17. Scientists use the term Radiative Forcing to understand global warming. What does it imply?

- (a) It refers to the cooling effect of certain aerosols in the atmosphere, offsetting some of the warming impacts of greenhouse gases.
- (b) It is the measure of the influence a particular factor has on the energy balance of the atmosphere, expressed as the change in average net radiation.
- (c) Radiative forcing is the change in surface temperatures directly attributed to natural factors such as volcanic eruptions and solar cycles, excluding anthropogenic influences.
- (d) It implies the overall heating effect on the climate system due to the absorption of infrared radiation by all greenhouse gases, considering no other interactions or feedback mechanisms.

Q18. How many of the following are greenhouse gases (GHGs)?

- 1. Chlorofluorocarbons (CFCs)
- 2. Hydrochlorofluorocarbons (HCFCs)
- 3. Hydrofluorocarbons (HFCs)
- 4. Perfluorocarbons (PFC)
- 5. Sulfur hexafluoride (SF<sub>6</sub>)
- 6. Nitrogen Trifluoride (NF<sub>3</sub>)
- 7. Ozone (O<sub>3</sub>)

Select the correct answer from the code given below.

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

Q19. Which of the following sectors is the largest anthropogenic source of methane emission?

- (a) Agriculture and animal rearing
- (b) Wastewater treatment
- (c) Natural gas production
- (d) Waste from landfills

Q20. Which of the following statements is *not* correct with respect to Ozone layer?

- (a) It filters all of the ultraviolet radiation of sunrays.
- (b) It is a dynamic layer with natural formation and destruction of ozone.
- (c) Both polar stratospheric clouds and polar vortex can contribute to ozone depletion.
- (d) Ozone layer can be measured in Dobson unit.

Q21. With reference to Kigali agreement consider the following statements:

1. It aims to phase down Hydrofluorocarbons, a major ozone depleting substance used in refrigeration.
2. It has been negotiated independently of Montreal protocol.
3. India has signed the agreement but not ratified it yet.

How many of the statements given above are correct?

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

Q22. Which of the following organization releases 'Emissions gap report' and 'Adaptation gas report'?

- (a) UNEP
- (b) UNFCCC
- (c) IUCN
- (d) WMO

Q23. The term 'Bonn challenge' sometimes seen in the news aims to tackle which of the following issues directly?

- (a) Climate change
- (b) Biodiversity loss
- (c) Air Pollution
- (d) Land degradation

Q24. Why were Conocarpus trees seen in the news recently?

- (a) It is an invasive mangrove species banned by few state governments in India.
- (b) It is a tree found in Himalaya known for its fruits with psychedelic properties.
- (c) It is an important tree used as an indicator species found in Shola vegetation of western Ghats.
- (d) It is an endemic tree to Andaman and Nicobar islands known for providing habitat to endemic birds of the island.

Q25. With reference to Kunming-Montreal Global Biodiversity Framework (KMGBF), consider the following statements:

1. It was adopted in COP26 of CBD in Glasgow, Scotland.
2. It has been declared under Aichi biodiversity targets.
3. The goals of KMGBF are non-binding in nature.

How many of the statements given above is/are correct?

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

Q26. With reference to tiger conservation consider the following statements:

1. India currently accounts for about 95% of the world's wild tiger population.
2. Out of all the states, Uttarakhand has the highest number of tigers in the country.
3. Bandipur tiger reserve in Karnataka has the highest number of tigers among the tiger reserves.

How many of the statements given above is/are correct?

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

Q27. The term Warsaw International Mechanism, sometimes seen in the news is associated with which of the following:

- (a) loss and damage
- (b) land degradation neutrality
- (c) global biodiversity framework
- (d) mitigation and adaptation projects

Q28. The term "Anthropocene epoch" has been widely used in scientific and public discourse to describe the most recent period in Earth's history when human activities started to have a significant global impact on Earth's geology and ecosystems.

Which of the following is *not* an indicator of Anthropocene epoch?

- (a) Widespread presence of plastics in oceans, soils, and even remote areas.
- (b) The global decrease in biodiversity due to natural climatic variations.
- (c) Increase in atmospheric concentrations of greenhouse gases.
- (d) Global distribution of radionuclides from atmospheric nuclear bomb tests.

Q29. Which of the following species does not belong to the same group as the other three?

- (a) Bengal Tiger
- (b) African Lion
- (c) Jaguar
- (d) Cheetah

Q30. With reference to recently concluded COP28 at Dubai consider the following statements:

- 1. During the summit, the first global stocktake, an assessment of the world's progress on climate action concluded.
- 2. COP28 member countries agreed to make a loss and damage fund administered by World Bank.
- 3. Both developed and developing countries agreed to phasing out fossil fuel subsidies.
- 4. It introduced ALTÉRRRA, a legally binding mechanism to triple renewable energy capacity by 2030.

Which of the statements given above is/are correct?

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

Q31. Consider the following statements about permafrost thawing:

- 1. It can release methane, a more potent greenhouse gas than carbon dioxide.
- 2. It can potentially lead to the destabilization of infrastructure in Arctic regions due to ground subsidence.
- 3. It can release ancient viruses and bacteria that have been dormant for thousands of years.

Which of the statements given above is/are correct?

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

Q32. Which of the following national park is drained by the Kunthi river and features tropical evergreen rainforest?

- (a) Silent Valley National Park
- (b) Sri Venkateswara National Park
- (c) Manas National Park
- (d) Khangchendzonga National Park

Q33. Malabar Parakeet, Ashambu Laughing Thrush and the White-bellied Sholakili sometimes seen in news are:

- (a) Butterflies
- (b) Birds
- (c) Fish
- (d) Reptiles

Q34. Which of the following is a tiger reserve but *not* a National park ?

- (a) Sunderban
- (b) Ranthambore
- (c) Namdapha
- (d) Nagarjunsagar-Srisailem

Q35: The species is known for extraordinary survival skills which includes withstanding temperatures as low as  $-272^{\circ}\text{C}$  and as high as  $150^{\circ}\text{C}$ , being exposed to the vacuum of outer space, being blasted with 500 times the dose of X-rays that would kill a human. In response to adverse conditions, it can enter a state of cryptobiosis, where their metabolic activities nearly stop. It may have survived last 5 major extinction events. Which of the following species is described above?

- (a) Arctic Woolly Bear Moth
- (b) Tardigrade
- (c) Antarctic Krill
- (d) Pompeii Worm

Q36. Consider the following statements about The International Treaty on Plant Genetic Resources for Food and Agriculture, 2001:

1. It establishes a global system to provide farmers, plant breeders, and scientists with access to plant genetic materials.
2. It recognizes farmers' rights as fundamental to the conservation and sustainable use of plant genetic resources for food and agriculture.
3. It mandates member countries to allocate a fixed percentage of their agricultural GDP towards the conservation of plant genetic resources.

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

Q37. Kigali agreement aims to phase down how many of the following?

1. Hydrofluorocarbons
2. Hydrochlorofluorocarbons
3. Chlorofluorocarbons

Select the correct answer from the code given below.

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

Q38. How does polar stratospheric clouds (PSCs) contribute to Ozone depletion?

1. They remove nitrogen compounds that moderate the destructive impact of chlorine.
2. They provide a surface which converts benign forms of chlorine into reactive, ozone-destroying forms.

Select the correct answer from the code given below.

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

Q39. Which of the following bodies are created under Wildlife Protection Act, 1972?

1. Central Zoo Authority
2. Genetic Engineering Appraisal Committee
3. National Ganga Council

Select the correct answer from the code given below.

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

Q40. Consider the following:

**Statement I:** The Ozone layer in stratosphere protects from harmful ultraviolet rays.

**Statement II:** There is a dynamic equilibrium between natural formation and destruction of Ozone in stratosphere.

- (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 but 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.

Q41. Which of the following is the best description of the term 'Climate Sensitivity'?

- (a) Funds required for mitigation and adaption projects due to climate change.
- (b) Increasing vulnerability of least developed countries due to worsening impact of climate change.
- (c) The excess heat energy received by earth due to increased concentration of greenhouse gases in the atmosphere.
- (d) Global temperature rise following a doubling of CO<sub>2</sub> concentration in the atmosphere compared to pre-industrial levels.

Q42. Which of the following is *not* part of India's recently updated Nationally Determined Contribution (NDC)?

- (a) To reduce emissions Intensity of its GDP by 45% by 2030, from 2005 level.
- (b) To achieve about 50% cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030.
- (c) To create an additional carbon sink of 2.5 to 3 billion tonnes of CO<sub>2</sub>.
- (d) To produce 5 MMT of green hydrogen by 2030.

Q43. Consider the following:

**Statement I:** Land degradation and desertification can contribute to climate change.

**Statement II:** Climate change can contribute to land degradation and desertification.

- (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 but 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.

Q44. Medicinal plant Rauwolfia vomitoria that grows in different Himalayan ranges producing different concentration levels of the active chemical (reserpine) best reflects:

- (a) Ecological diversity
- (b) Genetic diversity
- (c) Climatic diversity
- (d) Species diversity

Q45. Consider the following statements:

1. Cartagena protocol is an international agreement which aims to ensure the safe handling, transport and use of living modified organisms
2. Nagoya protocol is an international agreement which aims to ensure the safe handling, transport and use of living modified organisms.

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

Q46. How many of the following protected areas are part of UNESCO world heritage sites:

1. Dachigam National Park
2. Kaziranga National Park
3. Keoladeo National Park

Select the correct answer from the code given below.

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

Q47. If you want to see Irrawaddy dolphins in their natural habitat in India, which of the following is the best place to visit?

- (a) Kolleru Lake
- (b) Powai Lake
- (c) Chilika Lake
- (d) Deepor Beel

Q48. Which of the following are in Nilgiri Biosphere Reserve?

- (a) Mudumalai, Nagarhole, Wayanad National Park
- (b) Neyyar, Peppara and Shendurney Wildlife Sanctuaries
- (c) Kanha, Bandhavgarh and Pench National Park
- (d) Sri Venkateswara, Papikonda and Mrugavani National Park

Q49. Consider the following:

**Statement I:** Great Indian Bustard is listed as Critically Endangered in IUCN list of threatened species.

**Statement II:** Great Indian Bustard has an extremely small population that has undergone an extremely rapid decline owing to habitat loss and hunting.

- (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 but 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.

Q50. Which of the following is the largest national park in India is known for its limited vegetation due to high altitude; primarily alpine trees and herbs?

- (a) Gangotri National Park
- (b) Desert National Park
- (c) Hemis National Park
- (d) Namdapha National Park



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