



Drishti IAS Presents...



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Multiple
Choice
Questions
and
Answers

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Drishti IAS, 641, Mukherjee Nagar,
Opp. Signature View Apartment,
New Delhi

Drishti IAS, 21
Pusa Road, Karol Bagh
New Delhi - 05

Drishti IAS, Tashkent Marg,
Civil Lines, Prayagraj,
Uttar Pradesh

Drishti IAS, Tonk Road,
Vasundhara Colony,
Jaipur, Rajasthan

e-mail: englishsupport@groupdrishti.com, Website: www.drishtiiias.com

Contact: Inquiry (English): 8010440440, Inquiry (Hindi): 8750187501

QUESTIONS

1. Consider the following statements:

1. India is a part of the United Nations Convention on Biological Diversity.
2. Project Tiger is a Central Sector Scheme, launched in 1973.
3. Project Elephant was launched in 1972 for the protection of elephants, their habitats, and corridors.

How many of the above statements are correct?

- (A) Only one (B) Only two
(C) All three (D) None

2. Consider the following statements about Great Barrier Reef (GBR):

1. It is the world's largest coral reef system, located in the Coral Sea off the coast of Queensland, Australia.
2. It's also home to endangered species such as the dugong and the large green turtle.
3. It is a UNESCO World Heritage site and was inscribed in 1981.

How many of the above statements are not correct?

- A. Only one B. Only two
C. All three D. None

3. Consider the following statements about Snakebites Envenoming (SE):

1. It is classified by the World Health Organisation (WHO) as a High-Priority Neglected Tropical Disease (NTD).
2. The WHO has launched an Action Plan for the Prevention and Control of Snakebite Envenoming in countries where it is prevalent.

Which of the above statements is/are correct?

- A. Only 1 B. Only 2
C. Both 1 and 2 D. Neither 1 nor 2

4. Consider the following statements:

1. A wildfire requires three essential elements to sustain combustion like Fuel, Oxygen, and a Heat source.
2. Zombie fires usually spread entirely underground may continue to burn for months and destroy the vegetative cover of the soil.
3. Crown fires occur when fire spreads through the upper canopy of trees, often fueled by high winds and dry conditions.

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

- A. Only one B. Only two
C. All three D. None

5. Consider the following statements regarding Ethanol 100:

1. The Ministry of Chemicals and Fertilizers launched 'ETHANOL 100' at select retail outlets covering all the States and UTs of the country.
2. The initiative aligns with the vision to achieve 20% ethanol blending by 2025-26, reducing import dependency and boosting the agriculture sector.

Which of the statements given above is/are not correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

6. Consider the following statements regarding Black Carbon (BC):

1. BC is a short-lived pollutant that is the second-largest contributor to warming the planet behind carbon dioxide (CO₂).
2. Unlike other greenhouse gas emissions, BC is quickly washed out and can be eliminated from the atmosphere if emissions stop.

Which of the statements given above is/are not correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

7. Consider the following statements about Loss and Damage (L&D) Fund of COP28:

1. This fund is aimed at compensating countries grappling with climate change impacts.
2. The World Bank will be the "interim host" of the fund for four years, aligning with UNFCCC and the Paris Agreement.

Which of the above statements is/are not correct?

- A. Only 1 B. Only 2
C. Both 1 and 2 D. Neither 1 nor 2

8. Consider the following statements about Climate Finance:

1. The UN Climate Change Conference (UNFCCC) established a Loss and Damage Fund for climate disaster recovery in developing nations during COP27.
2. The New Collective Quantitative Goal (NCQG) is a new annual financial target that developed countries must meet from 2025 onward to provide climate finance to developing countries.

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 the Captive Elephant (Transfer or Transport) Rules, 2024:
1. The suitability of both the current and prospective habitats must be verified by an authorized veterinarian.
 2. The Chief Wildlife Warden has the authority to approve or reject the transfer of elephants at their discretion.
- Which of the above statements is/are correct?
- A. Only 1 B. Only 2
C. Both 1 and 2 D. Neither 1 nor 2
- 10.** Consider the following statements regarding 'Global Methane Pledge':
1. It was launched at UNFCCC COP26 in 2021 to catalyse action to reduce methane emissions.
 2. It aims for a 50% reduction in global methane emissions from 2020 levels by 2050.
- Which of the statements given above is/are not correct?
- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2
- 11.** Regarding Snakes, consider the following statements:
Statement-I: Certain particular snake species like cobras, kraits and Black mambas are used for medicinal and intoxication purposes.
Statement-II: Snake venom is a complex mixture of enzymes, peptides and proteins of low molecular mass with specific chemical and biological activities.
- 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
- 12.** Regarding forest fires, consider the following statements:
1. Dry deciduous forests experience severe fires compared to evergreen, semi-evergreen, and montane temperate forests.
 2. The forests of Northeast India, Odisha, Maharashtra, Jharkhand, Chhattisgarh, and Uttarakhand are the most vulnerable to fires during the November to June period.
- Which of the statements given above is/are not correct?
- A. 1 Only B. 2 Only
C. Both 1 and 2 D. Neither 1 nor 2
- 13.** Regarding the Intergovernmental Panel on Climate Change (IPCC), consider the following statements:
1. It was set up in 1988 by the World Meteorological Organization (WMO) and the International Union for Conservation of Nature (IUCN).
 2. IPCC assessments provide a scientific basis for governments at all levels to develop climate-related policies.
 3. Since 1988, the IPCC has delivered eleven Assessment Reports.
- How many of the above statements are correct?
- (A) Only one (B) Only two
(C) All three (D) None
- 14.** Consider the following statements:
1. Fresh dung contains methane along with water, making it essential for biogas production in anaerobic digestion.
 2. Methane, a key component of biogas, is produced in the rumen of bovines during the fermentation of plant material they consume.
- 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
- 15.** Regarding the Corbett Tiger Reserve, consider the following statements:
1. It is located in Himachal Pradesh.
 2. The Project Tiger was launched in 1973 in Corbett National Park.
 3. The Reserve is traversed by the Dhauliganga River.
- How many of the above statements are correct?
- (A) Only one (B) Only two
(C) All three (D) None
- 16.** Consider the following statements about Harit Nauka initiative:
1. This is to reduce greenhouse gas emissions as per the Maritime Amrit Kaal Vision 2047.
 2. As per the Harit Nauka initiative guidelines, all states have to make efforts to use green fuels for 50% of inland waterways-based passenger fleets in the next one decade, and 100% by 2045.
- Which of the above statements is/are correct?
- A. Only 1 B. Only 2
C. Both 1 and 2 D. Neither 1 nor 2

17. Consider the following activities:

1. Agricultural Activities
2. Livestock Farming
3. Biomass Burning

How many of the above are sources of Nitrogen Pollution?

- A. Only one
- B. Only two
- C. All three
- D. None of the above

18. Regarding the Convention on Nuclear Safety (CNS), consider the following statements:

1. It is the only non-binding nuclear treaty.
2. It aims to ensure the safety of nuclear power plants.
3. It is an incentive-based treaty that requires states to establish and maintain a regulatory framework for nuclear safety.

How many of the statements given above are correct?

- A. Only One
- B. Only Two
- C. All Three
- D. None

19. Consider the following statements:

Statement-I: Acid Rain is a complex environmental issue with multiple causes and widespread consequences.

Statement-II: Burning Fossil Fuels release sulfur dioxide (SO₂) and nitrogen oxides at higher temperatures (NO_x) are one of the causes of acid rain.

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

20. With reference to the Snow Leopard Population Assessment in India (SPAI) Program, consider the following statements:

1. The SPAI Program involves rigorous camera trapping, genetic sampling, and habitat assessments across various snow leopard habitats in India.
2. The Forest Research Institute (FRI) served as the National Coordinator for the SPAI, with support from snow leopard range states and conservation partners.

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

21. Consider the following statements:

Statement-I: Launched in 2008, National Action Plan on Climate Change (NAPCC) aims to achieve low-carbon and climate-resilient development for India, having 10 national missions forming the core of it.

Statement-II: India's Nationally Determined Contributions (NDCs) pledge to reduce the emissions intensity of GDP by 45% by 2030 from 2005 levels and generate 50% of electricity from non-fossil fuel sources by 2030.

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.

22. Consider the following statements with respect to 'Seaweeds':

1. They are referred to as the 'Medical Food of the 21st Century'.
2. Large seaweeds form dense underwater forests known as kelp forests, which act as underwater nurseries for fish, snails and sea urchins.
3. They act as bio-indicator by absorbing excess nutrients and signaling marine chemical damage.

How many of the above statements are not correct?

- (A) Only one
- (B) Only two
- (C) All three
- (D) None

23. Consider the following pairs:

Ramsar Site	State
1. Aghanashini Estuary	(a). Karnataka
2. Karaivetti Bird Sanctuary	(b). Tamil Nadu
3. Longwood Shola Reserve Forest	(c). Kerala

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

- A. 1 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. 1, 2 and 3

24. Consider the following statements:

Statement-I: The Dusted Apollo butterfly was discovered in 1990 and its distribution range extends from East Europe to Chinese Mainland.

Statement-II: The Dusted Apollo butterfly is a member of the snow Apollo genus of the swallowtail family.

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.

25. Consider the following:

Statement-I: The Royal Bengal Tigers of Simlipal boast a distinctive lineage with elevated melanin levels, giving rise to black and yellow interspersed stripes, making them pseudo-melanistic.

Statement-II: Melanism is a genetic condition, that results in increased melanin production, leading to black or nearly black skin, feathers, or hair in animals.

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

26. Regarding the Sea Cows, consider the following statements:

1. Dugongs dwell in zones such as the Caribbean, Gulf of Mexico, Amazon, East and West Africa.
2. Manatees inhabit coastal regions of the Indian and Pacific Oceans.
3. Both manatees and dugongs have been classified as vulnerable according to the IUCN status.

How many of the above statements are correct?

- A. Only one
- B. Only two
- C. All three
- D. None of the above

27. With reference to the Convention on Biological Diversity (CBD), consider the following statements:

1. It is a legally binding treaty to conserve biodiversity that has been in force since 1972.
2. India enacted Biological Diversity Act, 2002 to give effect to the provisions of the CBD.
3. The CBD Secretariat is based in Montreal, Canada.

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

28. With reference to the Water (Prevention and Control of Pollution) Amendment Bill, 2024, consider the following statements:

1. It focuses on decriminalising minor offences related to water pollution, alleviating fears of imprisonment for technical or procedural lapses.
2. It grants the central government authority to prescribe guidelines for the nomination of chairpersons of State Pollution Control Boards.

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

29. Regarding the Global Biodiversity Framework Fund, consider the following statements:

1. It is designed to spur and expedite investment in the conservation and sustainability of wildlife and ecosystems, which are threatened by wildfires, flooding, extreme weather, etc.
2. It will be managed by the Global Environment Facility (GEF) and will raise funds through private, philanthropic, and government investments.

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

30. With reference to COP (Conference of Parties) 28, consider the following statements:

1. The 28th Conference of Parties (COP-28) took place in Dubai, UAE, with representatives from 197 countries.
2. Declaration to Triple Nuclear Energy launched at COP28 aims to triple global nuclear energy capacity by 2050.

Which of the statements given above is/are not correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2



31. Consider the following:

Statement-I: According to India's Nationally Determined Contributions (NDC) goals, India pledges to reduce the emissions intensity of its GDP (Gross Domestic Product) by 45% by 2030, from the 2005 level.

Statement-II: PM Surya Ghar Muft Bijli Yojana, a rooftop solar scheme aims to solarize 1 crore households by providing up to 300 units of free electricity every month.

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

32. Regarding the Convention on the Conservation of Migratory Species of Wild Animals (CMS), consider the following statements:

- 1. It is popularly known as the Bonn Convention.
- 2. It lays the legal foundation to conduct conservation measures on a global scale.
- 3. India has signed a legally binding Memorandum of Understanding (MoU) with CMS on the conservation and management of Siberian Cranes.

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

33. Regarding the Thanthai Periyar Wildlife Sanctuary, consider the following statements:

- 1. The Thanthai Periyar Wildlife Sanctuary is situated in the Bargur Hills of Tamil Nadu.
- 2. The region is a significant part of the Nilgiris Elephant Reserve.
- 3. It serves as the catchment area for the Vaigai River.

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

34. Regarding the Indian Institute of Tropical Meteorology (IITM), consider the following statements:

- 1. The key areas of its study include monsoon meteorology and air-sea interactions in the South Asian climate.
- 2. IITM operates as an autonomous institute under the Ministry of Environment, Forest & Climate Change, Government of 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

35. Regarding the Spur-winged Lapwing, consider the following statements:

- 1. Spur-winged Lapwing belongs to the family of Charadriidae.
- 2. The bird is commonly found within the Central and Sub-Saharan regions of Africa.
- 3. The bird is classified as critically endangered according to the IUCN status.

How many of the above statements are correct?

- (A) Only one
- (B) Only two
- (C) All three
- (D) None

36. Consider the following:

- 1. King Cobra
- 2. Krait
- 3. Black Mamba

How many of the above are Elapidae snakes?

- (A) Only one
- (B) Only two
- (C) All three
- (D) None

37. Regarding the United Nations Environment Assembly, consider the following statements:

- 1. It is the world's highest-level decision-making body on the environment.
- 2. It meets every year to advance global environmental governance.
- 3. It was established at the United Nations Conference on Sustainable Development in June 2012.

How many of the above statements are correct?

- (A) Only one
- (B) Only two
- (C) All three
- (D) None

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

1. It was adopted during COP 15 of Convention of Biodiversity (CBD).
2. This historic Framework, sets out an ambitious pathway to reach the global vision of a world living in harmony with nature by 2030.

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

39. With reference to the Ankasamudra Bird Conservation Reserve, consider the following statements:

1. In 2017, Ankasamudra Lake was declared a 'Birds Conservation Reserve' as per Section 36 A of the Wildlife Protection Act, 1972.
2. It supports more than 1% of the biogeographic population of Painted Stork and Black-headed Ibis.

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. Consider the following sites:

1. Hemis National Park, Ladakh
2. Gangotri National Park, Uttarakhand
3. Khangchendzonga National Park, Sikkim

How many of the above is/are major habitat sites for Snow Leopard?

41. Consider the following statements with respect to 'abundance of wolves in India':

1. India boasts two wolf subspecies, the grey wolf in the peninsular region and the Himalayan or Tibetan wolf in the north.
2. The IUCN designates the gray wolf as vulnerable, whereas the Himalayan wolf is classified as least concern.

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

42. Regarding Biodiversity Credit Alliance, consider the following statements:

1. The Biodiversity Credit Alliance was launched at the 2023 G20 Summit presided by India.
2. The Biodiversity Credit Alliance seeks to garner backing and raise awareness across diverse stakeholders, including government entities, non-profits, and private businesses.

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

43. Regarding Buxa Tiger Reserve, consider the following statements:

1. The northern boundary of Buxa Tiger Reserve runs along the international border with Bhutan.
2. Its eastern border connects with that of Manipur State.
3. The Sinchula hill range lies all along the northern side of Buxa National Park.

How many of the above statements are correct?

- (A) Only one
- (B) Only two
- (C) All three
- (D) None

44. Consider the following statements:

Statement-I: The Wetland City Accreditation (WCA) is a voluntary accreditation system established by the Ramsar Convention during the Conference of the Contracting Parties (COP)-9 in 2016.

Statement-II: The scheme aims to promote the conservation and wise use of urban and peri-urban wetlands, as well as sustainable socio-economic benefits for local populations.

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.



45. Regarding the Cheetah Reintroduction Project, consider the following statements:

1. The Cheetah Reintroduction Project in India began in 2022, aiming to revive the cheetah population declared extinct in 1952.
2. The project involves the translocation of cheetahs from South Africa and Namibia to Kuno National Park in Madhya Pradesh.

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

46. With reference to the Darjeeling Zoo, consider the following statements:

1. It has the only conservative breeding programme for snow leopards in India.

2. It is the largest high altitude zoo in India

Which of the following statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

47. Consider the following statements:

1. Eucalyptus snout beetle is a leaf-feeding pest which is indigenous to Canada.
2. The Beetle can cause damage over vast areas as it has a great flight capability.

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

48. Consider the following statements:

1. The Ministry of Environment, Forest and Climate Change announced the merger of the two flagship programmes Project Tiger (PT) and Project Elephant as Project Tiger and Elephant (PTE).
2. The Wildlife Protection (Amendment) Act of 2006 did not prohibit the diversion of a "tiger's forest" for development projects.
3. Project Tiger, an initiative for wildlife conservation in India, was started in 1973.

How many of the statements given above are correct?

- A. Only one B. Only two
C. All three D. None

49. Consider the following statements:

1. The saltwater crocodile is the largest of all crocodilians, and the second-largest reptile in the world.
2. Both Bhitarkanika and Sundarbans are among the three strongholds of saltwater crocodiles, followed by the Andaman and Nicobar Islands.

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. Consider the following statements:

1. The largest known deep-sea coral reef is located off the coast of the Pacific Ocean.
2. The largest coral reef system in Shallow water is the Great Barrier Reef located on the northeast coast of Australia.

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

51. With reference to Wandering Albatross, consider the following statements:

1. It is the largest flying bird with a wingspan of 3.5 metres.
2. It is vulnerable as per IUCN Red list.

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

52. Regarding the Kaziranga National Park, consider the following statements:

1. It is the single largest undisturbed and representative area in the Brahmaputra Valley floodplain.
2. Rare golden tiger, a color variant of Bengal tiger, was recently sighted here.

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

53. With reference to the National Board for Wildlife, consider the following statements:

1. It is the apex body in India for all wildlife-related matters.
2. It is a statutory body constituted under the Environment Protection Act, 1986.
3. It is chaired by the Minister of Environment, Forest and Climate Change.

How many of the above statements are correct?

- | | |
|--------------|----------------------|
| A. Only one | B. Only two |
| C. All three | D. None of the above |

54. With reference to the Coral Reefs, consider the following statements:

1. The Great Barrier Reef is the largest coral reef system in the deep sea.
2. The deep sea coral reef exists in areas beyond the reach of sunlight.
3. Deep-sea coral reefs feed on organic matter that rains down from surface waters into the deep.

How many of the above statements are not correct?

- | | |
|--------------|----------------------|
| A. Only one | B. Only two |
| C. All three | D. None of the above |

55. Regarding the Himalayan Wolf, consider the following statements:

1. It is a mysterious lupine predator.
2. It is found in parts of China, Nepal, India, and Bhutan.
3. The IUCN status for the Himalayan Wolf is categorised as "Critically endangered."

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 |

56. Consider the following statements regarding Rhododendron:

1. Rhododendron is a large genus of woody plants.
2. These plants are characterised by their showy flowers that come in various colours such as white, pink, red, orange, and purple.
3. More than 100 species of Rhododendrons recorded in the Indian Himalayan Region till now.

How many of the statements given above is/are not correct?

- | | |
|--------------|-------------|
| A. Only one | B. Only two |
| C. All three | D. None |

57. Regarding Snow Leopard, consider the following statements:

1. It is listed in the Vulnerable category in the IUCN List of Threatened Species.
2. It is listed in Schedule-II of the Indian Wildlife (Protection) Act, 1972.

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:

Statement-I: The foundation for tiger conservation was established by the Wildlife (Protection) Act (WLPA) of 1972, which introduced the creation of National Parks and Wildlife Sanctuaries.

Statement-II: Critical Wildlife Habitat (CWH) are also established under the Wildlife Protection Act (WLPA).

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 |

59. Consider the following statements:

Statement-I: The study, "Balancing Climate Goals and Biodiversity Protection," highlights legal challenges arising from the 30x30 target, causing conflicts in land-based Carbon Dioxide Removal (CDR) strategies.

Statement-II: Nations have committed to the "30x30" biodiversity target to safeguard 30% of the world's terrestrial and marine areas by 2030.

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. |

60. With reference to Pelagic Birds, consider the following statements:

1. Pelagic birds are birds that spend a large portion of their lives on the open ocean.
2. The birds possess remarkably long, slender wings enabling extended flights without rest.
3. These birds feature a unique salt gland that extracts salt from seawater, preventing its accumulation to toxic levels.

How many of the statements given above are correct?

- A. Only one B. Only two
 C. All three D. None

61. Regarding National Green Tribunal (NGT), consider the following statements:

1. NGT was established under the Environment Protection Act, 1986.
2. The Chairperson of NGT is appointed by the President of India.
3. It operates under the rules laid down in the Code of Civil Procedure, 1908

How many of the above statements are not correct?

- (A) Only one (B) Only two
 (C) All three (D) None

62. Regarding the World Soil Day (WSD), consider the following statements:

1. It is celebrated on 5th December to honour the late King Bhumibol Adulyadej's commitment to sustainable soil management.
2. It was recommended by the International Union of Soil Sciences (IUSS) in 2002.
3. The theme for 2023 World Soil Day is "Soil and Water, a Source of Life.

How many of the statements given above are correct?

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

63. Regarding the Kiwi Bird, consider the following statements:

1. The Kiwi is a flightless bird endemic to New Zealand.
2. The International Union for Conservation of Nature (IUCN) categorizes it as "Vulnerable."
3. The Capital Kiwi Project in New Zealand aims to restore a wild kiwi population at a large scale through community-led efforts.

How many of the statements given above are correct?

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

64. Regarding the National Mission for Clean Ganga (NMCG), consider the following statements:

1. The National Mission for Clean Ganga (NMCG) was established under the Water (Prevention and Control of Pollution) Act, 1974.
2. It is implemented by the National Council for Rejuvenation, Protection, and Management of River Ganga which is headed by the Home Minister.

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

65. Regarding the Mummified Baboons, consider the following statements:

1. *Papio anubis* and *Papio hamadryas* are both species of baboons.
2. The IUCN Red List rates them as "Critically Endangered."

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

66. Regarding ethanol production, consider the following statements:

1. India has rolled out 20% ethanol-blended petrol in 2023 and aims to cover the entire country by 2025.
2. Ethanol yields from grains are higher compared to molasses.

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

67. Scimitar-horned oryx, recently in news, is best described as:

- A. An antelope adapted to arid environments
 B. A deep-sea carnivore dwelling in abyssal zones
 C. A rare avian species thriving in tropical rainforests
 D. An amphibious creature with unique bioluminescent features

68. Consider the following statements:

1. The Extended Producer Responsibility (EPR) mechanism shifts the financial burden of waste management from the producer to government.
2. The 'polluter pays' principle asserts that those who produce pollution should bear the costs of managing it.

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



69. Regarding the Wild Yak, consider the following statements:

1. Their current habitat is now limited to Bhutan and Nepal only.
2. The Wild Yak comes under Schedule I of the Wild Life (Protection) Act, 2022.
3. Their IUCN Status is critically endangered.

How many of the statements above are correct?

- (A) Only one
(B) Only two
(C) All three
(D) None

70. Consider the following statements regarding the Namdapha Flying Squirrel:

1. It is a rare nocturnal flying squirrel species found in the Namdapha Tiger Reserve in Arunachal Pradesh.
2. Its status on the IUCN Red List is Critically Endangered and is placed under Schedule I of the Wildlife (Protection) Act.

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

71. Regarding the Valmiki Tiger Reserve, consider the following statements:

1. It is the only tiger reserve in Bihar.
2. The vegetation of this Tiger Reserve is a combination of the Bhabar and Terai regions.
3. River Kosi flows through it.

How many of the statements given above are correct?

- A. Only One
B. Only Two
C. Only Three
D. None

72. Consider the following statements:

1. According to the report from the Wildlife Protection Society of India (WPSI), Madhya Pradesh has recorded the highest number of tiger fatalities in India.
2. Karnataka is home to the second-highest tiger population in India.

3. As per the latest report by International Union for the Conservation of Nature (IUCN), tigers have gone extinct in Cambodia, Laos, and Vietnam.

How many of the above statements are correct?

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

73. Consider the following statements:

1. Black Tigers are a rare colour variant of the tiger and are not a distinct species or geographic subspecies.
2. The phenomenon of abnormally dark or black coat in such tigers is termed pseudo-melanism or false colour.
3. Inbreeding in the Geographically isolated population is the reason behind this phenomenon.

How many of the above statements is/are not correct?

1. Only one
2. Only two
3. All three
4. None

74. Regarding the Wisent, consider the following statements:

1. It is the largest and heaviest terrestrial mammal in Africa.
2. The wisent plays a crucial part in restoring grassland habitats.
3. Their IUCN Red List status is Near Threatened.

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

75. With reference to Bonnet Macaque (*Macaca radiata*), consider the following statements:

1. The bonnet macaque gets its name from the whorls of hair on the crown of its head that resemble a cap or bonnet.
2. They are found only in peninsular India and live in close proximity with humans.
3. Its IUCN status is Critically Endangered as it is on the verge of going extinct.

How many of the statements given above are correct?

- A. Only one
B. Only two
C. All three
D. None



76. With reference to Goldfish, consider the following statements :

1. Goldfish was one of the earliest fish to be domesticated and a relatively small member of the Carp family.
2. It can eat almost anything and everything, including algae, aquatic plants, eggs, and invertebrates.
3. They can tolerate a wide range of water temperatures, reach sexual maturity quickly, and reproduce several times in one season.

How many of the statements given above is/are not correct?

- A. Only one B. Only two
C. All three D. None

77. Regarding the Kiwi Bird, consider the following statements:

1. This species is endemic to Argentina.
2. Kiwi is known for its eccentric traits such as being nocturnal, flightless, and having mouse-like whiskers.
3. This avian species is currently classified as critically endangered according to the IUCN status.

How many of the above statements are correct?

- (A) Only one (B) Only two
(C) All three (D) None

78. Consider the following statements regarding Global Warming Potential (GWP):

1. GWP is a measure of how much heat a greenhouse gas traps in the atmosphere over a specific time period, usually 100 years, compared to carbon dioxide (CO₂).
2. Carbon dioxide is the reference gas with a GWP of 1 and methane (CH₄) gave a higher GWP.
3. The Intergovernmental Panel on Climate Change (IPCC) provides GWP values for different gases.

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

- A. Only one B. Only two
C. All three D. None

79. Consider the following statements about the World Meteorological Organization (WMO):

1. It is an intergovernmental organization with a membership of 192 Member States and Territories, including India.
2. It originated from the International Meteorological Organization (IMO), which was established after the 1873 Vienna International Meteorological Congress.

3. It was established by the ratification of the WMO Convention and became the specialized agency of the United Nations for meteorology, operational hydrology and related geophysical sciences.
4. Its headquarters are located in New York, USA.

Which of the above statements are correct?

- A. 1 and 2 only B. 1, 2 and 3 only
C. 1, 3 and 4 only D. All of the above

80. Consider the following statements regarding the International Solar Alliance (ISA):

1. At present, 116 countries have signed and officially ratified the agreement to become full members of ISA.
2. During the Sixth Assembly of ISA in New Delhi, it was announced that Viability Gap Funding (VGF) for projects will be increased, ranging from 10% to 35%.
3. The ISA is guided by its 'Towards 1000' strategy which aims to generate 1,000 MW solar energy solutions by 2030, in each country.

How many of the above statements are correct?

- A. Only one B. Only two
C. All three D. None of the above

81. PUSA Decomposers, Happy Seeder and Palletisation are techniques often heard in reference to which of the following?

- A. Crop rotation
B. Precision agriculture
C. Alternative to Stubble Burning
D. None of the above

82. Consider the following statements regarding the Graded Response Action Plan (GRAP):

1. GRAP is an emergency measure designed to prevent the deterioration of air quality after a threshold in the Delhi-NCR region.
2. The Ministry of Environment, Forests & Climate Change (MoEF&CC) implements the GRAP in an incremental nature.
3. Commission for Air Quality Management in NCR & Adjoining Areas (CAQM) notified the GRAP in 2017.

How many of the above statements are not correct?

- A. Only one B. Only two
C. All three D. None



83. With reference to Carbon Border Adjustment Mechanism (CBAM), consider the following statements:

1. CBAM is part of the European Union's "Fit for 55 in 2030 package".
2. CBAM is aimed at reducing Carbon Emissions by ensuring that imported goods are subject to the same carbon costs as products produced within the EU.

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. Consider the following statements regarding Cheetah Reintroduction Project (CRP):

1. The CRP in India formally commenced in September 2022, to restore the population of cheetahs, which were declared extinct in the country in 1952.
2. The project involves the translocation of cheetahs from South Africa and Namibia to Kuno National Park in Madhya Pradesh.
3. The project is implemented by the National Tiger Conservation Authority (NTCA) in collaboration with the Wildlife Institute of India (WII).

How many of the above statements are not correct?

- (A) Only one
- (B) Only two
- (C) All three
- (D) None

85. Regarding the Global Tiger Recovery Program (GTRP) consider the following statements:

1. Global Tiger Recovery Program (GTRP) was launched in 2010 under the Global Tiger Initiative (GTI) by the World Bank to save wild Tigers.
2. Under GTRP Tiger Range Countries (TRCs) committed to triple wild Tiger populations by 2022.
3. GTRP 2.0 aligns with the Post-2020 Global Biodiversity Framework, providing an opportunity for TRCs to integrate Tiger conservation with global goals.

How many of the statements given above are correct?

- A. Only One
- B. Only Two
- C. All Three
- D. None

86. With reference to Plastic Waste Management (Amendment) Rules, 2022, consider the following statements:

1. The reuse of rigid plastic packaging material has been mandated in the guidelines to reduce the use of fresh plastic material for packaging.
2. The guidelines prohibit the sale and purchase of surplus extended producer responsibility certificates.

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

87. Regarding the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), consider the following statements:

1. CITES is a global pact among nations, designed to safeguard species by preventing the endangerment of wild animals and plants through international trade.
2. CITES originated from a 1963 resolution at an IUCN meeting.
3. CITES boasts one of the highest memberships among conservation agreements, currently comprising 184 Parties.

How many of the statements given above are correct?

- A. Only one
- B. Only two
- C. All three
- D. None

88. Consider the following statements:

1. The UNCCD is the only legally binding framework set up to address desertification and the effects of drought.
2. According to the UNCCD, 25% of global dust emissions originate from natural sources and the remaining 75% are attributed to human activities.

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

89. It is native to the Indo-Pacific region and is nicknamed 'Sea Gold' for its high market demand, particularly in China. Apart from its economic value, it is prized for health benefits. Its collagen content aids skin health by preventing wrinkles, earning it a natural anti-ageing reputation. Additionally, the Omega-3 in it is believed to enhance infants' IQ by promoting the growth of brain cells.

Which of the following is well-described by the above-given description?

- A. Abalone
- B. Sea Cucumber
- C. Sea Urchin
- D. Ghol Fish



90. Regarding the Compressed Bio-Gas (CBG), consider the following statements:

1. CBG is a renewable, environmentally friendly gaseous fuel derived from the aerobic decomposition of organic materials.
2. The resulting biogas primarily consists of oxygen (usually over 90%), carbon dioxide, traces of hydrogen sulfide, and moisture.

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

91. Consider the following statements:

1. Green Leaf Volatiles create unpleasant smell for humans.
2. Green Leaf Volatiles function as a warning signal for plants.

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

92. Which of the following statements is/are correct about rat-hole mining?

1. It is a method of extracting coal from narrow, horizontal seams, prevalent in Meghalaya.
2. It has been banned by the National Green Tribunal (NGT) since 2014 for being unscientific and hazardous.

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

93. Regarding the Global Tiger Forum (GTF), consider the following statements:

1. The GTF is the only intergovernmental international body established to embark on a global campaign to protect the Tiger.
2. Its secretariat is based in New Delhi, India
3. All Tiger range countries are members of GTF.

How many of the statements given above are correct?

- A. Only One
- B. Only Two
- C. All Three
- D. None

94. Which protected areas are present within the Nilgiri Biosphere Reserve?

1. Mudumalai Wildlife Sanctuary
2. Wayanad Wildlife Sanctuary
3. Bandipur National Park
4. Nagarhole National Park
5. Silent Valley

Select the correct answer using the code given below:

- A. 1, 2 and 5 only
- B. 1, 2, 3 and 5 only
- C. 2, 3 and 4 only
- D. 1, 2, 3, 4 and 5

95. Which among the following can be described as characteristics of Tortoises:

1. High-domed, rounded and heavy shell
2. Adapted for life in water
3. Primarily omnivorous
4. Thick, columnar legs, claw-like toes

Select the correct answer using the code given below:

- A. 1 and 4 only
- B. 2 and 3 only
- C. 1, 3 and 4 only
- D. 1, 2, 3 and 4

96. Consider the following statements regarding Methane emissions:

1. Methane has more than 80 times the warming power of carbon dioxide over the first 20 years of its lifetime in the atmosphere.
2. Methane curbs generation of Tropospheric Ozone.
3. Improving cattle feed can help reduce methane emissions by cattles.

How many of the above statements are correct?

- A. Only one
- B. Only two
- C. All three
- D. None

97. Which of the following statements is not correct about Platypuses?

- A. Platypuses are unique to Australia and possess webbed feet for swimming.
- B. Platypuses primarily feed at night on aquatic invertebrates.
- C. Platypuses are listed as Nearly threatened in the IUCN red list.
- D. Platypuses inhabit Marinewater systems.

98. With reference to Dandeli Forest, consider the following statements:

1. Dandeli forest is located in the Eastern Ghats.
2. The Kali Tiger Reserve is a protected area adjacent to the Dandeli Forest.
3. The invasive Eupatorium weed is replacing native grasses in the forest.

How many of the statements given above are correct?

- | | |
|--------------|-------------|
| A. Only one | B. Only two |
| C. All three | D. None |

99. With reference to the Ganga River Dolphins, consider the following statements:

1. They hunt by emitting ultrasonic sounds, which bounces off of fish and other prey, enabling them to “see” an image in their mind.
2. They can only live in freshwater and is essentially blind.
3. It is the National aquatic animal of India and state aquatic animal of Assam.

How many of the above statements are correct?

- | | |
|--------------|-------------|
| A. Only one | B. Only two |
| C. All three | D. None |

100. With reference to the amphibians, consider the following statements:

1. These are multicellular vertebrates that live both on land and water.
2. They are the first cold-blooded animals to have appeared on land.
3. Being Cold-blooded animals, amphibians can regulate their internal body temperature with the change in the environment.

How many of the above statements are not correct?

- (A) Only one
- (B) Only two
- (C) All three
- (D) None

101. With reference to Dhole (*Cuon alpinus*), consider the following statements:

1. Dhole is primarily a herbivore.
2. The IUCN status for Dhole is critically endangered.
3. The Indian government sanctioned its first Dhole conservation breeding center in Visakhapatnam.

How many of the statements given above are correct?

- | | |
|--------------|-------------|
| A. Only one | B. Only two |
| C. All three | D. None |

102. With reference to International Coral Reef Initiative (ICRI), consider the following statements:

1. It is a global partnership between Nations and organizations that strives to preserve coral reefs and related ecosystems around the world.
2. India has played a pivotal role as a founding member of the initiative.

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

103. With reference to the Stratospheric Aerosol Intervention (SAI), consider the following statements:

1. SAI introduces aerosols into the stratosphere to create a cooling effect due to decreased albedo, which occurs naturally from volcanic winter.
2. SAI is a proposed method of solar geoengineering (or solar radiation modification) to reduce global warming.
3. Moderate SAI levels could enhance food productivity in mid-latitude temperate regions like North America and Eurasia.

How many of the above statements are correct?

- (A) Only one
- (B) Only two
- (C) All three
- (D) None

104. With reference to the Dancing Frogs, consider the following statements:

1. Dancing frogs, specifically, are a group of frogs belonging to the *Micrixalus* genus.
2. The population of dancing frogs is threatened by various anthropogenic factors, including invasive species of Mosquito.
3. They prefer habitats with a thick canopy cover, and are often found near slow-moving perennial streams within the Western Ghats.

How many of the above statements are not correct?

- (A) Only one
- (B) Only two
- (C) All three
- (D) None

105. Consider the following statements with respect to 'UN-Habitat':

1. It is a programme to promote socially and environmentally sustainable human settlements development and the achievement of adequate shelter for all.
2. The theme of the World Habitat Day, 2023 is "Resilient Urban Economies. Cities as drivers of growth and recovery".
3. UN-Habitat Scroll of Honour award is handed over at the Global Observance of the World Habitat Day.

How many of the above statements are correct?

- (A) Only one
(B) Only two
(C) All three
(D) None

106. With reference to Ozone Hole, consider the following statements:

1. Ozone hole is an area of the troposphere where the ozone layer is depleted.
2. In response to the ozone depletion crisis, the international community ratified the Kyoto Protocol.

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

107. With reference to Methane gas, consider the following statements:

1. Methane is a highly potent greenhouse gas responsible for about 30% of global warming since the Industrial Revolution.
2. Methane has more than 80 times the warming power of carbon dioxide over the first 20 years of its lifetime in the atmosphere.
3. Methane is the primary reason for ground-level ozone pollution.

Which of the statements given above is/are correct?

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

108. Consider the following statements regarding the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA):

1. It is a scientific advisory body under the Convention on Biological Diversity (CBD).
2. It assists the Conference of the Parties (COP) and other subsidiary bodies with timely advice relating to the implementation of the CBD.

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

109. With reference to technological interventions to curb air pollution in India, consider the following statements:

1. Dust suppressants are composed of sulfur salts, which are mixed with water and then sprayed on roads.
2. Wind Augmentation and Air Purifying Unit (WAYU) technology aims to neutralize pollutants through ionization processes.
3. Smog towers are air purifiers that target the reduction of particulate matter and pollutants in a large urban locality.

How many of the statements given above are correct?

- A. Only one
B. Only two
C. All three
D. None

110. With reference to Biomass Co-Firing, consider the following statements:

1. Biomass co-firing is the practice of substituting a part of the fuel with biomass at coal thermal plants.
2. The Ministry of New and Renewable Energy (MNRE) has approved 'Biomass pellet manufacturing' as an eligible activity under Priority Sector Lending (PSL).

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

111. Consider the following statements:

1. Land Degradation Neutrality (LDN) means to secure enough healthy and productive natural resources by avoiding degradation whenever possible and restoring land that has already been degraded.
2. The Bonn Challenge aims to bring 350 million hectares of the world's deforested and degraded land into restoration by 2030.

Which one of the statements given above is/are correct?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2



112. Consider the following statements:

Statement I: According to the Ministry of New & Renewable Energy, Green hydrogen is defined as hydrogen production that emits no more than 2 kg of carbon dioxide per kg of hydrogen.

Statement II: India's standards for green hydrogen production permit the use of biomass, which, when burned, also generates carbon emissions.

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

113. With reference to coastal management in India, consider the following statements:

- The Ministry of Environment, Forest & Climate Change (MoEFCC) sets the hazard line for India's coast to manage shoreline changes.
- The Biological Diversity Act, 2002 aims to conserve coastal areas and livelihoods, allowing erosion control measures while defining No Development Zones.
- The Coastal Management Information System (CMIS) collects near-shore coastal data for designing and maintaining protection structures.

How many of the statements given above are correct?

- Only one
- Only two
- All three
- None

114. Consider the following statements regarding Green Credit:

- Green Credit refers to a unit of incentive provided to individuals and entities engaged in activities that deliver a positive impact on the environment.
- This program is part of the broader 'LiFE' campaign (Lifestyle for Environment).
- Green Credit program operates under carbon credits provided by the Carbon Credit Trading Scheme, 2023.

How many of the above statements is/are not correct?

- Only one
- Only two
- All three
- None

115. Consider the following statements with respect to 'Metal Mining Pollution' :

- Metal mining pollution refers to the contamination and environmental degradation caused by the extraction and processing of Metallic Ores to obtain valuable metals.
- Elements such as Lead, Arsenic etc , detrimental to both ecosystems and human health, tend to accumulate downstream from mining sites.
- Acid mine drainage (AMD) causes metal mining pollution when nitrite minerals in the mined rocks are exposed to air and water, leading to the production of nitric acid.

How many of the above statements are correct?

- Only one
- Only two
- All three
- None

116. Consider the following following statements:

- Flex-fuel vehicles (FFV) have engines that can run on flexible fuel, which can include up to 100% ethanol.
- The Government of India has advanced the target for 20% ethanol blending in petrol (also called E20) to 2025 from 2030.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

117. Consider the following following statements about 'Red Sand Boa':

- The Red Sand Boa is the largest of the sand boa in the world with its IUCN status as near threatened.
- It is mainly found in Indian islands.

Which of the statements given above is/are not correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

118. Consider the following statements about Hoolock Gibbons:

- Hoolock Gibbons, recognized as the smallest and quickest among all apes, dwells in tropical and subtropical forests found in Southeast Asia.
- Their habitat is limited to the states of Assam and Arunachal Pradesh.
- These species are included in Schedule 1 of the Indian (Wildlife) Protection Act of 1972 and are categorized as endangered by the IUCN.

How many of the given above statements are correct?

- Only one
- Only two
- Only three
- None of the above



119. With reference to the Changthangi goat, consider the following statements:

1. The Changthangi goat is found in the Changthang region of Ladakh.
2. The Changthangi goat is usually domesticated and raised by nomadic communities called the Changpa.
3. The Mohair Wool used in weaving the shawl is obtained from the Changthangi goats.

How many of the above statements are correct?

- (A) Only one
- (B) Only two
- (C) All three
- (D) None

120. Consider the following statements regarding 'Leopards':

1. Leopard is the smallest of the Big Cats like the Tiger, Lion, Jaguar, Leopard, and Snow Leopard).
2. It is known for its ability to adapt in a variety of habitats and having nocturnal characteristics.
3. A melanistic leopard is often called black panther and mistakenly thought to be a different species.

How many of the above statements are correct?

- (A) Only one
- (B) Only two
- (C) All three
- (D) None

121. Consider the following statements':

1. National Green Tribunal (NGT) was established in 2010 under the National Green Tribunal Act.
2. The Bhoj Wetland, also known as Bhopal Lake, is a designated Ramsar site.

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

122. Which one of the following is the best description of 'Ship Samudra Prahari', that was in the news recently?

- (a) Amphibious warfare ship
- (b) Pollution Control Vessel
- (c) Torpedo launch and recovery vessel
- (d) Nuclear-powered aircraft carrier

123. Consider the following International Initiatives related to marine pollution-

1. UNCLOS
2. MARPOL
3. London Convention

India is a member of which of the above ?

- a. 1 & 2 only
- b. 3 only
- c. 2 & 3 only
- d. 1,2 & 3

124. Consider the following statements:

1. The central government's Elephant Corridor report shows that West Bengal has the largest number of elephant corridors.
2. The largest population of wild Asian Elephants is found in India, with Karnataka having the highest number of elephants in the country.
3. The International Union for Conservation of Nature (IUCN) Red List of threatened species categorizes the Asian Elephant as critically endangered and the African Forest Elephant as endangered.

How many of the statements given above are correct?

- A. Only one
- B. Only two
- C. All three
- D. None

125. Consider the following statements:

1. World Rhino Day, announced by the World Wildlife Fund (WWF), is an annual event held on September 22 to promote awareness for all five rhino species and conservation efforts.
2. India, Bhutan, Nepal, Indonesia, and Malaysia have signed the New Delhi Declaration on Asian Rhinos to ensure the conservation and protection of the species.

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

- 126.** From which region of the country did scientists from the Zoological Survey of India (ZSI) recently discover a new species of vibrant orange coloured deep water marine fish?
- Andaman Islands
 - Anaimalai Forests
 - Digha Mohana in West Bengal
 - Tropical rain forests of northeast
- 127.** With reference to the Mukurthi National Park, consider the following statements:
- It is located in the northwest corner of Karnataka.
 - It is a part of Nilgiri Biosphere Reserve
 - Nilgiri tahr is the keystone species of Mukurthi National Park
- How many of the statements given above are correct?
- Only one
 - Only two
 - All three
 - None
- 128.** With reference to the United Nations Climate Ambition Summit (CAS), consider the following statements:
- The CAS aimed to accelerate climate action as a prelude to the 28th Conference of Parties (COP28).
 - China, USA and India are the most active participants of CAS.
 - In this Summit, India updated its goal to achieve net-zero emissions by 2070.
- How many of the statements given above are correct?
- Only one
 - Only two
 - All three
 - None
- 129.** Consider the following statements:
- Indian pangolin and Chinese pangolin are the only two extant species of Pangolins in Asia.
 - The habitat of pangolins is very limited; grasslands and agricultural fields.
 - In India, the Chinese pangolin can be found in Bihar, West Bengal, and Assam.
- How many of the above statements are correct?
- Only one
 - Only two
 - All three
 - None of the above
- 130.** Consider the following statements about the protection status of lions:
- Lions are listed as Endangered on the IUCN Red List.
 - All lion populations worldwide are included in CITES Appendix I.
 - In India, lions are protected under Schedule I of the Wildlife (Protection) Act 1972.
- Which of the statements given above is/are not correct?
- I and II
 - I and III
 - II and III
 - All of the above
- 131.** With reference to the Mangroves, consider the following statements:
- The International Day for the Conservation of the Mangrove Ecosystem is celebrated on 26 July every year.
 - Sundarbans in West Bengal are the largest mangrove forest regions in the world.
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2
- 132.** With reference to the Exclusive Economic Zone (EEZ), consider the following statements:
- Each coastal State may claim an EEZ beyond and adjacent to its territorial sea that extends seaward up to 200 nautical miles from its baselines.
 - Within its EEZ, a coastal state has rights to carry out activities like the production of energy from the water, currents and wind.
- Which of the statements given above is/are not correct?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2
- 133.**
- Statement-I: The range of the Himalayan vulture extends across several countries, including India, Nepal, Bhutan, and China, where it thrives in challenging high-altitude environments.
- Statement-II: Under the IUCN Red list, Himalayan vulture is listed as critically endangered.
- 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

134. With reference to the Exclusive Economic Zone (EEZ), consider the following statements:

1. Each coastal State may claim an EEZ beyond and adjacent to its territorial sea that extends seaward up to 200 nautical miles from its baselines.
2. Within its EEZ, a coastal state has rights to carry out activities like the production of energy from the water, currents and wind.

Which of the statements given above is/are not correct?

- | | |
|-----------------|--------------------|
| A. 1 only | B. 2 only |
| C. Both 1 and 2 | D. Neither 1 nor 2 |

135. Consider the following statements:

1. Monitoring of Illegal Killing of Elephants (MIKE) Programme was established by the IUCN in 1997.
2. Asian elephants are listed as Critically Endangered on the IUCN Red List of threatened species.
3. India has 30 Elephant Reserves as of July 2023.

How many of the above statements are correct?

- A. Only one
- B. Only two
- C. All three
- D. None

136. Which of the following bodies is not created under the Wildlife Protection Act (WPA), 1972?

- A. Central Zoo Authority
- B. Animal Welfare Board of India
- C. Wildlife Crime Control Bureau
- D. None of the above

137. Consider the following statements regarding Methane:

1. It has a longer atmospheric lifespan as compared to CO₂ and has heat-trapping capacity approximately 28-36 times stronger than CO₂ over a 100-year period.
2. 'Harit Dhara' (HD) is an anti-methanogenic feed supplement developed by the Indian Council of Agricultural Research (ICAR).
3. India, along with 100 other countries, pledged to cut methane emissions by at least 30% by 2030 from the 2020 levels at UNFCCC COP26 (Global Methane Pledge).

How many of the above statements are correct?

- | | |
|--------------|----------------------|
| A. Only one | B. Only two |
| C. All three | D. None of the above |

138. 'Well to Gate' term is related to -

- a. Ancient Water Harvesting Methods
- b. Emission standards for green hydrogen
- c. Techniques for Exploring Crude Oil
- d. Reimagined Focus of the Jal Jeevan Mission

139. With reference to the Kampala Declaration on Climate Change, consider the following statements:

1. The Declaration is the first comprehensive, action-oriented framework led by European countries to address climate-induced mobility.
2. The initiative was supported by the International Organization for Migration (IOM) and the UN Framework Convention on Climate Change (UNFCCC).
3. European countries adopted this declaration to address the interconnection between human mobility and climate change on the continent.

How many of the above statements are correct?

- | | |
|---------------|--------------|
| (A) Only one | (B) Only two |
| (C) All three | (D) None |

140. Consider the following statements regarding the National Tiger Conservation Authority:

1. It provides statutory authority to Project Tiger.
2. It fosters Center-State accountability in management of Tiger Reserves.
3. The state governments notify an area as a Tiger Reserve on the recommendation of NTCA.
4. One of its objectives is to address the livelihood interests of local people in areas surrounding Tiger Reserves.

How many of the above statements are correct?

- | | |
|---------------|-------------|
| A. Only one | B. Only two |
| C. Only three | D. All four |

141. It is a remarkable bat species native to the Indian subcontinent, characterized by its large size and fox-like facial features, usually displaying a dark brown, gray, or black body, often with a distinct yellowish mantle. Males are generally larger than females. This species occurs in tropical regions of South Central Asia, from Pakistan to China, and as far south as the Maldives Islands. It is considered as vermin that causes extensive damage to fruit orchards, and are therefore considered pests in many regions.

Which of the given species is described by the above given description?



- A. Indian flying fox (*Pteropus giganteus*)
- B. Common vampire bat (*Desmodus rotundus*)
- C. Greater horseshoe bat (*Rhinolophus ferrumequinum*)
- D. Egyptian fruit bat (*Rousettus aegyptiacus*)

142. With reference to Lions, consider the following statements:

1. They are divided into two subspecies only i.e., the African lion and the Asiatic lion.
2. They are found in sub-Saharan Africa and a small population exists in the Gir Forest National Park in India.
3. The protection status of African lions in the IUCN red list is endangered across the world.

How many of the statements above are correct?

- A. Only one
- B. Only two
- C. All three
- D. None

143. Consider the following statements regarding Jellyfish:

1. Jellyfish are members of the phylum Cnidaria, a group of animals that includes corals, sea anemones, hydroids, and siphonophores.
2. Despite their name, jellyfish do not have many characteristics of a fish, they are invertebrates, or animals with no backbones.
3. Bioluminescence is one of the characteristics of all the jellyfish.

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

- A. Only one
- B. Only two
- C. All three
- D. None

144. Which of the following characteristics is typically associated with warm-blooded animals (endotherms)?

- A. They rely on external sources of heat for thermoregulation.
- B. Their body temperature varies with the external environment.
- C. They have a low metabolic rate.
- D. They can inhabit diverse environments due to their ability to regulate body temperature.

145. With reference to Seagrass Meadows, Consider the following statements:

1. Seagrass refers to a group of flowering plants that grow in marine environments, predominantly in shallow coastal waters.
 2. They thrive well in protected coastal areas in muddy waters.
 3. Seagrasses are highly effective at sequestering carbon dioxide (CO₂) from the atmosphere, making them essential in mitigating the impacts of climate change.
 4. Antarctica is the only continent without seagrasses.
- Which of the above given statements is/are not correct?

- a. Only one
- b. Only two
- c. Only three
- d. All four

146. Consider the following statements regarding Sustainable Aviation Fuel:

1. It has been created using materials like non-edible and edible oils, as well as used cooking oil.
2. It can be mixed with regular jet fuel and used together.
3. It has lower sulfur content.

Which of the statements given above is/are correct?

- a. 1 and 3 only
- b. 2 and 3 only
- c. 1 and 2 only
- d. 1, 2 and 3

147. Consider the following statements regarding the Paris Agreement:

1. It is a legally binding agreement under the United Nations Framework Convention on Climate Change.
2. The goal of the Paris Agreement is to limit global warming to well below 2°C above pre-industrial levels.
3. Under the Paris Agreement, each country is required to submit and update their Nationally Determined Contributions (NDCs) every 10 years.

Which of the statements above is/are correct?

- a. 1 and 2 only
- b. 2 and 3 only
- c. 2 only
- d. 1, 2 and 3

148. Consider the following statements regarding the National Green Tribunal?

1. It is a statutory body established under the Environment Protection Act, 1986.
2. It can take Suo Motu cognizance of the environmental cases and has the power of a Civil Court.
3. NGT is mandated to dispose applications or appeals within 6 months of the filing.

Which of the statements given above is/are not correct?

- a. 2 and 3 only
- b. 1 only
- c. 3 only
- d. 1 and 2 only

149. Consider the following statements:

1. Similipal Tiger Reserve has the world's highest rate of black tiger sightings in the world.
2. Black Tiger is not a distinct species but it's a rare colour variant of the Bengal tiger because of genetic mutation.
3. Similipal National Park is a part of UNESCO World Network of Biosphere Reserve.

Which of the statements given above is/are correct?

- a. 2 and 3 only
- b. 1 and 3 only
- c. 3 only
- d. 1, 2 and 3

150. Consider the following statements regarding Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA):

1. CORSIA aims to achieve carbon-neutral growth in the aviation industry by requiring airlines to offset any increase in emissions above 2015 levels.
2. CORSIA is applicable only to flights originating from one country to another.

Which of the statements given above is/are not correct?

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

151. Consider the following statement:

1. Petersberg Dialogue on United Nations Framework Convention on Climate Change (UNFCCC) was hosted by Germany and the United Arab Emirates.
2. The dialogue focuses on climate adaptation, climate finance, and dealing with loss and damage.
3. Dialogue called for a tripling of renewable energy capacity by 2030 followed by a doubling in 2040.

Which of the statements given above is/are correct?

- A. 1 only
- B. 1 and 2 only
- C. 1, 2 and 3
- D. 1 and 3 only

152. Consider the following statements regarding 'Carbon Border Adjustment Mechanism (CBAM)':

1. CBAM is part of the "Fit for 55 in 2030 package", which is the EU's plan to reduce greenhouse gas emissions by at least 55% by 2030
2. It ensures that imported goods are subject to the same carbon costs as products produced within the EU.

Which of the statements given above is/are not correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

153. Regarding the Extended Producer Responsibility (EPR), consider the following statements:

1. The Ministry of Environment, Forest and Climate Change (MoEFCC) has introduced a draft notification on Extended Producer Responsibility (EPR) on waste oil.
2. It makes producers responsible for the environmental impacts of their products throughout their life cycle.
3. EPR is applicable to e-waste only.

Which of the statements given above is/are correct?

- a. 1 and 2 only
- b. 2 only
- c. 3 only
- d. 1, 2 and 3 only

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

1. Radiative forcing is the difference between incoming solar radiation and outgoing terrestrial radiation.
2. The positive radiative forcing indicates that the amount of outgoing energy from the atmosphere is more than the amount of incoming energy in the atmosphere.

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



155. Which of the following recently became India's first city to track progress on the UN Sustainable Development Goals (SDGs)?

- A. Pune
B. Bhopal
C. Chennai
D. Indore

156. Consider the following statements:

- As compared to carbon dioxide, methane is not only more potent in terms of global warming capacity but also has a longer lifespan in the atmosphere.
- At the UNFCCC COP27, nearly 100 countries took the Global Methane Pledge to cut methane emissions by at least 40% by 2030 from the 2020 levels.
- As a part of the Global Methane Pledge, the Govt of India launched the Methane Alert and Response System (MARS) to be administered by the CPC B.

Which of the statements given above is/are not correct?

- A. 1 and 2 only
B. 2 only
C. 2 and 3 only
D. 1, 2 and 3

157. With reference to the Mission LiFE consider the following statements:

- The idea of LiFE was introduced during the 26th United Nations Climate Change Conference of the Parties (COP26).
- The Mission plans to create and nurture 'Pro-Planet People' (P3), a global network of individuals.
- The Mission envisions replacing the prevalent 'use-and-dispose' economy with a circular economy.

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

158. Regarding the Gharial species, consider the following statements:

- Gharials are a unique crocodylian species native to the Indian subcontinent.
- Gharials are primarily found in the Chambal River in India.
- Gharials are listed as vulnerable on the IUCN Red List.

Which of the statements given above is/are correct?

- a. 1 and 2 only
b. 2 only
c. 3 only
d. 1, 2, and 3 only

159. With reference to the Ocean Acidification, consider the following statements:

- Increased carbon dioxide absorption by the ocean leads to higher acidity.
- The ocean is the most acidic in summer as compared to winter.

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

160. Regarding the Axolotls, consider the following statements:

- It is a species of salamander with remarkable regenerative abilities.
- They are aquatic and spend their whole lives underwater.
- The International Union for the Conservation of Nature and Natural Resources (IUCN) has listed the axolotl as a critically endangered species.

Which of the statements given above is/are correct?

- a. 1 and 2 only
b. 1 and 3 only
c. 2 and 3 only
d. 1, 2, and 3

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

- The Convention on Biological Diversity (CBD) was signed at the Earth Summit (1992) at Rio de Janeiro in Brazil.
- The Secretariat of the Convention on Biological Diversity (CBD) is based in Montreal, Canada.
- Nagoya Protocol is a legal instrument that focuses on access to genetic resources and the fair and equitable sharing of benefits.

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

162. With reference to the Chilika lake, consider the following statements:

- It is Asia's largest and world's second largest lagoon.
- The major attraction at Chilika is Irrawaddy dolphins.
- It was the first designated Indian wetland under Ramsar Convention.

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

163. Consider the following, statements:

1. Microplastic includes microbeads that are used in cosmetics and personal care products.
2. Closing the loop is an initiative to tackle plastic pollution all around the world.

Which of the statements given above is/are not correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

164. Consider the following statements:

Statement-I: Central pollution control board provides environmental guidelines for Stone crushing units.

Statement-II: It is the apex body for environmental protection and pollution control in India.

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.

165. Consider the following statements regarding 'Convention on Migratory Species (CMS)':

1. Convention on Migratory Species is also known as Bonn Convention.
2. It is a legally binding treaty to conserve terrestrial, marine and avian migratory species throughout their range.
3. India has signed a legally binding MoU with CMS on conservation of Siberian Cranes, Marine Turtles, Dugongs, and Raptors.

Which of the statements given above is/are correct?

- A. 1 only B. 1 and 2 only
C. 1, 2 and 3 D. 2 and 3 only

166. Consider the following statements regarding 'Carbon Border Adjustment Mechanism (CBAM)':

1. The CBAM will be applied to imports of certain goods and selected precursors whose production is carbon intensive and at most significant risk of carbon leakage.
2. The import of cement, iron and steel comes under the ambit of CBAM because of being carbon intensive products.

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

167. With reference to the Direct Reduction Process by Hydrogen, consider the following statements:

1. It is a process that uses hydrogen gas to reduce iron oxide into metallic iron without the use of a blast furnace.
2. This method is also known as the green route for steel production, as it significantly reduces the carbon emissions.

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

168. Consider the following statements regarding Pygmy Hog:

1. It is found only in India.
2. It is listed as Critically Endangered species under IUCN Red List.
3. Pygmy Hog Conservation Programme is being implemented by NGOs - Aaranyak and EcoSystems India.

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

169. Which of the protected sites given below are in Odisha?

1. Bhitarkanika National Park
2. Intangki Wildlife Sanctuary
3. Chilika (Nalaban island) WLS.
4. Baisipalli WLS.
5. Namdapha National Park
6. Nandankanan WLS.
7. Gahirmatha (Marine) WLS.

Select the correct answer using the codes given below

- a. 1, 2, 4 and 7 only
b. 1, 3, 5, 6 and 7 only
c. 1, 3, 4, 6 and 7 only
d. 2, 3, 4, 5 and 7 only

170. They are elusive and nocturnal animals whose size and colour depend on the habitat and are vulnerable according to IUCN Red List. They are great climbers and hide in trees, where they hide their prey to avoid competition. They are members of the cat family, they live in Asia, sub-Saharan Africa, Southern Russia, and the Indian subcontinent.

The above given description is correct about which of the following animal?

- a. Lions
- b. Leopards
- c. Tigers
- d. Beers

171. Consider the following statements:

- 1. Only the Great One-Horned Rhino is found in India.
- 2. The Great One-Horned Rhino is listed as Vulnerable in IUCN Red List.
- 3. The species is restricted to small habitats in Indo-Nepal terai and northern West Bengal and Assam.

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 only

172. With respect to National Mission on Natural Farming (NMNF), consider the following statements:

- 1. Under this scheme, farmers will receive financial assistance of Rs. 15,000 per hectare per year for three years.
- 2. A Web portal was also created for the promotion of natural farming with information on the implementation framework.

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

173. Consider the following statements:

- 1. Waste Processing in India has gone up by over 4 times from 17% in 2014 to 75% in 2023.
- 2. The Garbage Free Cities (GFC)-Star rating protocol was launched by the Ministry of Housing and Urban Affairs (MoHUA) in 2021.

Which of the statements is/are correct?

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

174. With reference to salt marshes, consider the following statements:

- 1. Marshes protect shorelines from erosion by filtering runoff and excess nutrients.
- 2. Coastal squeeze is a phenomenon where the marshes are squeezed between rising seas and man-made barriers.

Which of the statements given above is/are correct?

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

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

- 1. The United Nations held its first water conference in 46 years in 2023 in New York.
- 2. The UN 2023 Water Conference's theme is "Our watershed moment: uniting the world for water".
- 3. Clean water and Sanitation is the 5th Sustainable Development Goal (SDG).

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

176. Consider the following statements regarding the United Nations Framework Convention on Climate Change (UNFCCC):

- 1. It was signed in 1992 at the Earth Summit.
- 2. It is the parent treaty of the Kyoto Protocol.

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

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

- 1. Gulf of Mannar Biosphere Reserve (GoMBR) is India's first marine biosphere reserve.
- 2. The aims of the Bonn Convention (1979) are to conserve terrestrial, marine and avian migratory species throughout their range.
- 3. The Chilean mesquite, a drought-resistant plant is native to North American countries.

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



178. Consider the following statements related to State of Forest in India:

- Protected forests hold a higher degree of protection than reserve forests.
- Through the 44th Amendment Act, 1978, forests were transferred from State to Concurrent List.

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

179. Consider the following statements regarding 'Mangrove Pitta':

- The Mangrove Pitta is a species of bird that can be found in a few pockets of eastern India, including Odisha's Bhitarkanika and West Bengal's Sundarbans.
- The IUCN (International Union for Conservation of Nature) has categorized and evaluated the species and has listed it as Vulnerable.

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

180. Consider the following statements regarding International Mother Earth Day (Earth Day):

- It is celebrated on 22nd April every year.
- The theme for this year's Earth Day was 'One Earth One Family One Future'.
- The Paris Agreement on Climate Change was signed on Earth Day in 2016.

Which of the statements given above is/are not correct?

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

181. Consider the following statements regarding 'Gandhi Sagar Wildlife Sanctuary':

- It is located near Kota, Rajasthan.
- The vegetation found here is tropical evergreen forest.
- Chinkara, Nilgai, Spotted Deer, Dancing Deer are found here.

Which of the statements given above is/are not correct?

- a. 1 only b. 2 and 3 only
c. 3 only d. 1, 2 and 3

182. Consider the following statements regarding Olive Ridley Turtle:

- It has been declared critically endangered by the IUCN.
- They are known for their unique mass nesting practice known as Arribada.
- They are the smallest of all the sea turtle species found in the world.

Which of the above given statements is/are correct?

- a. 2 and 3 only b. 1 and 2 only
c. 2 only d. 1 and 3 only

183. Consider the following statements regarding Eco Sensitive Zones:

- They are declared under the Environmental (Protection) Act, 1972.
- They are a 10 km area around an Ecologically sensitive area Like National Park and can't be extended beyond 10 kms.

Which of the statements given above is/are not correct?

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

184. Consider the following statements regarding Gangetic Dolphin:

- Gangetic Dolphin is a freshwater dolphin found in the Ganga and Brahmaputra River systems of India, Bangladesh and Nepal.
- It is listed as Endangered in the IUCN Red List of Threatened Species.
- They are generally blind and hunt using echolocation techniques.

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

185. With reference to the Net-Zero target, consider the following statements:

- It is a state in which a country attains carbon neutrality.
- More than 70 countries have promised to become Net Zero by 2050.
- India has promised to cut its emissions to net zero by 2070 at the Conference of Parties -26 (COP) summit.

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



- 186.** Which of the following best describes the term "Arribada"?
- A type of dance form from South India
 - A type of bird migration observed in the Arctic
 - A mass nesting behaviour exhibited by certain species of sea turtles
 - A traditional fishing method used in Southeast Asia
- 187.** Consider the following statements regarding the 'National Green Tribunal'.
- The Chairperson is appointed by the Central Government in consultation with the Chief Justice of India.
 - It has suo motu powers to take up environmental issues.
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2
- 188.** Consider the following statements regarding the Kunming-Montreal Global Biodiversity Framework:
- The framework is a legally binding global agreement that aims to promote the conservation and sustainable use of biodiversity.
 - The framework aims to achieve at least 30% of the planet's land and marine areas under protected status by 2030.
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2
- 189.** With reference to Bandipur tiger reserve, consider the following statements:
- Bandipur tiger reserve is present in the eastern ghats of India.
 - Doddabetta Peak is the highest point in Bandipur national park.
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2
 - None of the above.
- 190.** What is the Institute for Energy Economics and Financial Analysis (IEEFA)?
- A non-profit research organization that provides analysis and commentary on energy markets, policies, and investments.
 - A government agency responsible for regulating the energy sector in the United States.
 - A private company that specializes in energy trading and investments.
 - An advocacy group that promotes the use of renewable energy sources.
- 191.** With reference to the World Wildlife Day, consider the following statements:
- It is celebrated on 3rd of March every year.
 - The theme of this year is 'Partnerships for Wildlife Conservation'.
 - This day coincides with the day of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).
- Which of the statements given above is/are correct?
- | | |
|-----------------|-----------------|
| A. 1 and 2 only | B. 1 and 3 only |
| C. 2 and 3 only | D. 1, 2 and 3 |
- 192.** Consider the following statements about teak:
- It is also known as Indian oak and teca.
 - Its production covers 10% of global annual timber demand.
 - This wood species is listed in the IUCN Red List of Threatened Species as endangered.
- Which of the statements given above is/are correct?
- 1 and 2 only
 - 2 only
 - 1 and 3 only
 - 1, 2 and 3
- 193.** Regarding the Seahorse, consider the following statements:
- They are classified as fish, in the genus Hippocampus.
 - In India, they are primarily found in Andaman and Nicobar Islands.
 - They have a unique reproductive habit, where the male gives birth to child.
- 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 only |



194. Consider the following statements about Forest Certification:

1. It is a mechanism for forest monitoring, tracing and labelling timber, wood and pulp products and non-timber forest products.
2. In India, forests in only Uttar Pradesh are certified.

Which of the above statements is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 & 2
- D. Neither 1 nor 2

195. With reference to the Mugger or Marsh Crocodiles, consider the following statements:

1. It is found in India and Pakistan only.
2. It is considered as the Earth's largest living crocodile species.
3. It is listed as vulnerable in the IUCN red list.

Which of the statements given above is/are correct?

- A. 1 only
- B. 1 and 3 only
- C. 3 only
- D. 1, 2 and 3

196. With reference to Great Indian Bustard, consider the following statements:

1. It's International Union for Conservation of Nature (IUCN) status is Critically Endangered.
2. In India, its population is confined mostly to Gujarat and Rajasthan.

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

197. With reference to the Kalakkad – Mundanthurai Tiger Reserve (KMTR), consider the following statements:

1. It was declared as the first tiger reserve in Kerala.
2. It is the part of the Agasthyamala Biosphere Reserve.

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

198. Consider the following statements regarding 'Action Plan for Vulture Conservation':

1. The MoEFCC released the Action Plan for Vulture Conservation with the Drugs Controller General of India (DCGI).
2. It prevents the poisoning of the principal food of vultures, the cattle carcasses, with veterinary NSAIDs.

Which of the statements given above is/are not correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

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

1. Ocean acidification occurs when the pH of seawater decreases as a result of dissolved carbon dioxide.
2. Ocean acidification makes it difficult for many marine organisms to build and maintain their shells and skeletons.

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

200. With reference to World Air Quality Report, consider the following statements:

1. It has been prepared by United Nations Environment Programme.
2. According to it, New Delhi is the most polluted capital city in the world.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 & 2
- D. Neither 1 nor 2

201. With reference to the Eutrophication, consider the following statements:

1. It is the process where a water body, such as a lake, river, or ocean, becomes excessively rich in nutrients like nitrogen and phosphorus.
2. Algal bloom and Hypoxia in the water body are the two most prominent outcomes of eutrophication.

Which of the statements given above is/are not correct?

- | | |
|-----------------|--------------------|
| A. 1 only | B. 2 only |
| C. Both 1 and 2 | D. Neither 1 nor 2 |

202. With reference to Horseshoe crabs, consider the following statements:

1. It is one of the oldest living creatures on the earth.
2. India has two species of horseshoe crabs, coastal horseshoe crabs and mangrove horseshoe crabs.
3. They are protected under Schedule 4 Wildlife Protection Act, 1972.

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

203. Consider the following statements:

1. Corals lose their vibrant colors and turn white due to the loss of their symbiotic bryophytes.
2. The mosses commonly associated with corals in symbiotic relations are zooxanthellae.

Which of the statements given above is/are not correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

204. With reference to National Chambal Sanctuary, consider the following statements:

1. National Chambal Sanctuary is located on the banks of the Yamuna River, spread across the states of Uttar Pradesh, Madhya Pradesh, and Rajasthan.
2. Gharial which is predominantly found in National Chambal Sanctuary is listed in Schedule III of the Wildlife Protection Act, 1972.

Which of the statements given above is/are correct?

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

205. Regarding the Sarus Crane, consider the following statements:

1. It is listed in Schedule IV of the Wildlife Protection Act.
2. It is the tallest flying bird in the world.
3. Its IUCN status is Nearly Threatened (NT).

Which of the statements given above is/are correct?

- A. 1 and 3 only
- B. 2 and 3 only
- C. 1 and 2 only
- D. 1, 2 and 3 only

206. Consider the following pairs:

Festivals	Region
1. Sajibu Cheiraoba	Manipur
2. Ugadi	Deccan region
3. Bohag Bihu	Assam

How many pairs given above are correctly matched?

- A. None of the pairs
- B. Only one pair
- C. Only two pairs
- D. All three pairs

207. Regarding the Project Elephant, consider the following statements:

1. It is a centrally sponsored scheme.
2. It provides financial and technical support to wildlife management efforts by states.
3. It supports creating awareness of conservation among local people.

Which of the statements given above is/are correct?

- a. 1 and 2 only
- b. 2 only
- c. 3 only
- d. 1, 2 and 3 only

208. With reference to the initiatives related to the shipping sector in India, consider the following statements:

1. The target of the Green Tug Transition Programme is to have the initial Green Tugs working in all major ports by 2025.
2. The target of the Gati Shakti aims to reduce carbon emissions per ton of cargo handled by 30% by 2030.
3. The Green Voyage 2050 Project is between the Government of Norway and International Maritime Organisation (IMO).

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

209. With reference to biotransformation technology, consider the following statements:

1. Biotransformation is the process of using biological organisms to transform and break down pollutants into less harmful compounds.
2. The plastic produced through Biotransformation technology feels like conventional plastic.
3. Biotransformation technology has no negative impact on the environment.

Which of the statements given above is/are correct?

- A. 1 and 2 only
- B. 2 only
- C. 3 only
- D. 1, 2 and 3 only



210. With reference to Asiatic Lion, consider the following statements:

1. At present, they are found in Gir National Park and Wildlife Sanctuary only.
2. They are classified in Schedule I under the Wildlife (Protection) Act, 1972.

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

211. Consider the following statements regarding Greater One horned rhino:

1. Greater one horned rhino is the only species of rhino found in India.
2. Greater one horned rhino is the largest of 5 species of rhinos.
3. Its status is vulnerable under IUCN red list.

Which of the statement is/are correct?

- a. 1 and 2 only
- b. 2 and 3 only
- c. 1 and 3 only
- d. All of the above

212. Consider the following statements regarding Marine Protected Areas (MPA):

1. An MPA is an area designated to protect marine resources for the future, where fishing, research or other human activities are not allowed.
2. The Southern Ocean has two MPAs, in the South Orkney Islands and in the Ross Sea.

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

213. Regarding the Moray Eel, consider the following statements:

1. They are found in all tropical and subtropical seas and in shallow water among reefs and rocks.
2. Their IUCN red list status is Least Concern (LC).

Which of the statements given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 & 2
- d. Neither 1 nor 2

214. With reference to the Maritime India Vision 2030, consider the following statements:

1. It is a ten-year blueprint for the maritime sector which was released by the Prime Minister at the Maritime India Summit.
2. It will supersede the Sagarmala initiative.

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

215. With reference to the Intergovernmental Panel on Climate Change (IPCC), consider the following statements:

1. It is the international body for assessing the science related to climate change.
2. It was set up in 1988 by the World Meteorological Organisation (WMO) and United Nations Environment Programme (UNEP)

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

ANSWERS

1. Ans: A

Exp:

The Government Measures to Tackle Human-Animal Conflict:

- **The Wildlife Protection Act, 1972:** The act provides the legal framework for the activities, Prohibition of hunting, Protection and management of wildlife habitats, establishment of protected areas, etc.
- **The Biological Diversity Act, 2002:** India is a part of the **United Nations Convention** on Biological Diversity. It ensures that the Biological Diversity Act complements rather than contradicts existing laws concerning forests and wildlife. **Hence, statement 1 is correct.**
- **Project Tiger:** Project Tiger is a Centrally Sponsored Scheme, launched in 1973. It provides havens for tigers in the country's national parks. **Hence, statement 2 is not correct.**
- **Project Elephant:** It is a centrally sponsored scheme and was launched in February 1992 for the protection of elephants, their habitats, and corridors. **Hence, statement 3 is not correct.**

1. Ans: A

Exp:

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- **Project Elephant:** It is a centrally sponsored scheme and was launched in February 1992 for the protection of elephants, their habitats, and corridors. **Hence, statement 3 is not correct.**

2. Ans: D

Exp:

- The Great Barrier Reef (GBR) is the **world's largest coral reef system**. It's located in the Coral Sea off the coast of Queensland, Australia. **Hence, statement 1 is correct.**

- ◆ The GBR stretches across 2,300 km and is made up of around 3,000 individual reefs and 900 islands.

- The GBR is home to 400 types of coral, and 1,500 species of fish. It's also home to endangered species such as the **dugong** and the large green turtle. **Hence, statement 2 is correct.**

- The GBR is a **UNESCO World Heritage site** and was inscribed in 1981. **Hence, statement 3 is correct.**

- ◆ In 2023, the UNESCO Heritage Committee **refrained from listing Australia's Great Barrier Reef as a site "in danger"** but warned that the world's biggest coral reef ecosystem remained under **"serious threat" from pollution and the warming of oceans.**

- Widespread mass bleaching of the Great Barrier Reef was first seen in 1998 and happened again in 2002, 2016, 2017, 2020, 2022 and now in 2024.

3. Ans: A

Exp:

- Snakebite Envenoming (SE) is classified by the **World Health Organisation (WHO)** as a **High-Priority Neglected Tropical Disease (NTD)**. **Hence, statement 1 is correct.**

- SE is a potentially life-threatening disease that typically results **from the injection of a mixture of different toxins** (venom) following the bite of a Venomous Snake.

- Neglected Tropical Diseases (NTDs) are a **group of infections** that are most **common among marginalized communities** in the developing regions of Africa, Asia and the Americas.

- They are caused by a variety of **pathogens** such as viruses, bacteria, protozoa and parasitic worms.

- The **Ministry of Health and Family Welfare** has launched a **National Action Plan for Prevention and Control of Snakebite Envenoming (NAP-SE)**, under the 'One Health' approach. **Hence, statement 2 is not correct.**

- The NAP-SE provides a broad framework for **management, prevention and control of Snakebite envenoming** in India.



4. Ans: C

Exp:

- Wildfire or Vegetation fire, can be described as any uncontrolled combustion or burning of plants in a natural setting such as a forest, grassland, brushland or tundra, which consumes the natural fuels and spreads based on environmental conditions (e.g., wind, topography). A wildfire requires **three essential elements to sustain combustion like Fuel, Oxygen, and a Heat source. Hence, Statement 1 is correct**
- **Underground Fire/Zombie Fire: The fires of low intensity, consuming the organic matter beneath and the surface litter of the forest floor are sub-grouped as underground fires. In most of the dense forests, a thick mantle of organic matter is found on top of the mineral soil.**
 - ◆ These fires usually **spread entirely underground** and burn for some meters below the surface.
 - ◆ This fire spreads very slowly and in most cases it becomes **very hard to detect and control** such types of fires.
 - ◆ They may continue to **burn for months** and destroy the vegetative cover of the soil. **Hence, statement 2 is correct.**
- **Canopy or Crown Fires: These occur when fire spreads through the upper canopy of trees, often fueled by high winds and dry conditions. They can be particularly intense and difficult to control. Hence, statement 3 is correct.**

5. Ans: A

Exp:

The Ministry of Petroleum & Natural Gas launched 'ETHANOL 100' at select 183 retail outlets in Maharashtra, Karnataka, Uttar Pradesh, New Delhi, and Tamil Nadu.

Hence, **statement 1 is not correct.**

- ETHANOL 100 is a revolutionary automotive fuel that **consists of 100% ethanol.**
 - ◆ It is a biofuel produced from **renewable sources such as corn, sugarcane, or other plant materials.**
- ETHANOL 100 is aimed at reducing **dependence on fossil fuels**, promoting sustainability, and contributing to a cleaner environment by lowering **green house gas emissions** compared to traditional gasoline.
- The initiative aligns with the vision to achieve **20% ethanol blending by 2025-26**, reducing import dependency and boosting the agriculture sector. **Hence, statement 2 is correct.**

- ◆ The move towards ETHANOL 100 reflects a shift towards **sustainable technologies and decarbonization.**

6. Ans: D

Exp:

- **Black carbon (BC)** is the **dark, sooty material** emitted alongside other pollutants when **biomass and fossil fuels** are not fully combusted.
- BC is a short-lived pollutant that is the second-largest contributor to warming the planet behind **carbon dioxide (CO₂)**. **Hence, statement 1 is correct.**
- Unlike other **greenhouse gas emissions**, BC is quickly washed out and can be eliminated from the atmosphere if emissions stop. **Hence, Statement 2 is correct.**
 - ◆ Unlike historical carbon emissions it is also a localised source with greater local impact.
 - ◆ Black carbon is a kind of an aerosol.

7. Ans: D

Exp:

- The **28th Conference of Parties (COP28)** to the **United Nations Framework Convention on Climate Change (UNFCCC)** was held in **Dubai, United Arab Emirates.**
- COP28, member countries reached an agreement to operationalize the **Loss and Damage (L&D) fund** aimed at compensating countries grappling with climate change impacts. **Hence, statement 1 is correct.**
 - ◆ The **World Bank** will be the "interim host" of the fund for four years, aligning with UNFCCC and the **Paris Agreement. Hence, statement 2 is correct.**
- All developing countries are eligible to apply, and every country is "invited" to contribute voluntarily.
 - ◆ A specific percentage is earmarked for Least Developed Countries and Small Island Developing States.

8. Ans: C

Exp

- The UN Climate Change Conference (UNFCCC COP 27) convened in Sharm El-Sheikh, Egypt established a Loss and Damage Fund for climate disaster recovery in developing nations. **Hence, statement 1 is correct.**
- As preparations for COP29 in Baku intensify, attention now turns to finance discussions, particularly the New Collective Quantitative Goal (NCQG).

The NCQG is a new annual financial target that developed countries must meet from 2025 onward to provide climate finance to developing countries. **Hence, statement 2 is correct.**



9. Ans: B

Exp:

About the Captive Elephant (Transfer or Transport) Rules, 2024 :

- **Circumstances for Transfer of Captive Elephants:**
Transfer may occur when:
 - ◆ The **owner is no longer capable** of adequately maintaining the elephant's welfare.
 - ◆ If it's determined that the **elephant will receive better care in the new circumstances** compared to its current situation.
 - ◆ The **Chief Wildlife Warden may deem it necessary** for the elephant's better upkeep based on the specific circumstances of the case.
- **Procedure Within the State:**
 - ◆ Before a transfer within a state, the **elephant's health must be confirmed** by a veterinarian.
 - ◆ The suitability of both the current and prospective habitats must be verified by the **Deputy Conservator of Forests**. Hence, **statement 1 is not correct**.
 - ◆ Approval or rejection of the transfer is at the discretion of the **Chief Wildlife Warden** based on these assessments. Hence, **statement 2 is correct**
- **Procedure Outside the State:**
 - ◆ Similar conditions apply for transferring elephants outside a state.
 - ◆ Additionally, the **elephant's genetic profile must be registered** with the MoEF&CC before the transfer.

10. Ans: B

Exp:

- The Global Methane Pledge was launched at **UNFCCC COP26 in November 2021** to catalyse action to reduce methane emissions. Led by the US and the EU, the Pledge now has 111 country participants who together are responsible for **45% of global human-caused methane emissions**. Hence, **statement 1 is correct**.
- It aims for a 30% reduction in global methane emissions from 2020 levels by 2030. Hence, **Statement 2 is not correct**.
 - ◆ India has **opted not to sign** the Global Methane Pledge.
- Methane is the simplest hydrocarbon, consisting of one carbon atom and four hydrogen atoms (CH₄).
 - ◆ It is the primary component of natural gas, possessing key characteristics:

- Odourless, colourless, and tasteless gas.
- Lighter than air.
- Burns with a **blue flame in complete combustion**, yielding carbon dioxide (CO₂) and water (H₂O) in the presence of oxygen.

11. Ans: A

Exp:

Snakes:

- Certain particular snake species like **cobras, kraits and Black mambas** are used for medicinal and intoxication purposes. Hence, **statement-I is correct**.
- Snake venom is a **complex mixture** of enzymes, peptides and proteins of low molecular mass with specific chemical and biological activities. Hence, **statement-II is correct**.

Hence, option A is correct because both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement I.

12. Ans: D

Exp:

Forest fires:

- Severe fires break out in **dry deciduous forests** (34.80%), while evergreen, semi-evergreen, and montane temperate forests are comparatively less prone to fires. Hence, **statement 1 is correct**.
- The forests of Northeast India, Odisha, Maharashtra, Jharkhand, Chhattisgarh, and Uttarakhand are the most vulnerable to fires during the **November to June period**. Hence, **statement 2 is correct**.
 - ◆ In 2021, a series of forest fires broke out in Uttarakhand, Himachal Pradesh, Nagaland-Manipur border, Odisha, Madhya Pradesh, and Gujarat, including in wildlife sanctuaries.

13. Ans: A

Exp:

- **Intergovernmental Panel on Climate Change (IPCC):**
 - ◆ The Intergovernmental Panel on Climate Change (IPCC) is the **international** body for assessing the science related to climate change.
 - ◆ It was **set up in 1988 by the World Meteorological Organization (WMO) and United Nations Environment Programme (UNEP)** to provide policymakers with regular assessments of the scientific basis of climate change, its impacts and future risks, and options for adaptation and mitigation. Hence, **statement 1 is not correct**.



- ◆ IPCC assessments provide a **scientific basis for governments at all levels to develop climate-related policies**, and they underlie negotiations at the UN Climate Conference – the **United Nations Framework Convention on Climate Change (UNFCCC)**. Hence, **statement 2 is correct**.

- **IPCC Assessment Report:**

- ◆ Since 1988, the IPCC has **had six assessment cycles and delivered six Assessment Reports**, the most comprehensive scientific reports about climate change produced worldwide. Hence, **statement 3 is not correct**.

14. Ans: C

Exp:

- Fresh dung contains 80-85% water; one kg weighs hardly 200 grams on drying.
- Fresh dung contains **methane along with water**, making it essential for **biogas** production in **anaerobic digestion** (breaks down biodegradable material without oxygen and produces biogas). Hence, **statement 1 is correct**.
- Methane, a key component of biogas, is produced in the **rumen of bovines (the first of four stomach compartments in bovines)** during the fermentation of plant material they consume. Hence, **statement 2 is correct**.
- Bacteria-like microbes in the rumen, known as **archaea**, utilise carbon dioxide and hydrogen produced during carbohydrate fermentation to **generate methane**.

15. Ans: A

Exp:

- **About Corbett Tiger Reserve:**
 - ◆ It is located in the Nainital district of Uttarakhand. Hence, **statement 1 is not correct**.
 - ◆ The Project Tiger was launched in 1973 in Corbett National Park (first National Park of India), which is part of Corbett Tiger Reserve. Hence, **statement 2 is correct**.
 - The national park was established in 1936 as Hailey National Park to protect the endangered Bengal tiger.
 - ◆ The core area forms the Corbett National Park while the buffer contains reserve forests as well as the Sonanadi Wildlife Sanctuary.

- ◆ The entire area of the reserve is mountainous and falls in the Shivalik and Outer Himalaya geological provinces.

- ◆ Ramganga, Sonanadi, Mandal, Palain and Kosi are the major rivers flowing through the Reserve. Hence, **statement 3 is not correct**.

16. Ans: C

Exp:

- **Harit Nauka Initiative:**

- ◆ The **Ministry of Ports, Shipping and Waterways** unveiled the **Harit Nauka guidelines** for inland vessels in January 2024.

- **Guidelines:**

- ◆ As per the guidelines, all states have to make efforts to use **green fuels** for **50% of inland waterways-based passenger fleets** in the next one decade, and 100% by 2045. Hence, **statement 2 is correct**.
- ◆ This is to reduce **greenhouse gas emissions** as per the **Maritime Amrit Kaal Vision 2047**. Hence, **statement 1 is correct**.

17. Ans: C

Exp:

- Nitrogen pollution refers to the **excessive presence of nitrogen compounds in the environment**, primarily in water bodies like rivers and lakes
- **Sources of Nitrogen Pollution:**
 - ◆ **Agricultural Activities:** One of the main drivers of nitrogen pollution has been the rising consumption of **nitrogen-based fertilizer**, which can leach into groundwater or runoff into surface water bodies.
 - ◆ **Industrial Processes:** Manufacturing processes, particularly those involved in the **production of nitrogen-based chemicals** and fertilisers, release nitrogen compounds into the environment.
 - **Combustion of fossil fuels in industries** also emits nitrogen oxides (NO_x) into the atmosphere.
 - ◆ **Livestock Farming:** Livestock waste, primarily from **manure and urine**, contains nitrogen compounds such as **ammonia**.
 - Improper storage and management of livestock waste can lead to nitrogen runoff, contaminating water bodies and contributing to eutrophication.

- The livestock sector currently emits **65 teragrams (Tg) of nitrogen per year**, equivalent to one-third of current human-induced nitrogen emissions.

◆ **Biomass Burning:** Wildfires and burning of **cow dung cake as a fuel** release nitrogen oxides (NO_x) and nitrous oxide (N₂O) into the atmosphere.

- These emissions contribute to **air pollution** and can have regional and global impacts on atmospheric chemistry and **climate**.

● Hence, **Option C is correct**.

18. Ans: B

Exp:

Convention on Nuclear Safety (CNS):

- The CNS is a **legally binding** treaty that was adopted in 1994. **Hence, statement 1 is not correct.**
- It aims to **ensure the safety** of nuclear power plants. **Hence, statement 2 is correct.**
- The CNS is an **incentive-based treaty** that requires states to establish and maintain a regulatory framework for nuclear safety. The CNS also aims to protect people, society, and the environment from the harmful effects of ionizing radiation. **Hence, statement 3 is correct.**

19. Ans: B

Exp:

- **Acid Rain** is a complex environmental issue with multiple causes and widespread consequences, and it has its origins in Fossil Fuels. **Hence, statement-I is correct.**
- **Burning Fossil Fuels**, particularly those containing sulfur, release sulfur dioxide (SO₂) and, at higher temperatures, nitrogen oxides (NO_x) are one of the causes of acid rain. **Hence, statement-II is correct.**
- Both Statement-I and Statement-II are correct but Statement-II is not the correct explanation for Statement I. **Hence, option B is correct.**

20. Ans: A

Exp:

- Report on the Status of Snow Leopards in India is a result of the Snow Leopard Population Assessment in India (SPAI) Program.
- The **SPAI Program** involves rigorous **camera trapping**, **genetic sampling**, and **habitat assessments** across various snow leopard habitats in India. **Hence, statement 1 is correct.**

- The **Wildlife Institute of India (WII)** served as the National Coordinator for the **SPAI**, with support from snow leopard range states and conservation partners. **Hence, statement 2 is not correct.**

21. Ans: D

Exp:

● **National Action Plan on Climate Change (NAPCC):**

- ◆ Launched in 2008 to address climate change challenges in India.
- ◆ Aim to achieve low-carbon and climate-resilient development for India.
- ◆ There are **8 national missions forming the core of the NAPCC** which represent multi-pronged, long term and integrated strategies for achieving key goals in climate change. **Hence, statement I is not correct.**

● **Nationally Determined Contributions (NDC):**

- ◆ India's commitments to reduce greenhouse gas emissions and adapt to climate change.
- ◆ Pledged to **reduce the emissions intensity of GDP by 45% by 2030 from 2005 levels** and generate 50% of electricity from non-fossil fuel sources by 2030.
- ◆ Pledged to create additional carbon sink and achieve net zero emissions by 2070. **Hence, statement II is correct.**

- Hence, option D is correct because Statement-I is not correct, but Statement-II is correct.

22. Ans: D

Exp:

● **Seaweeds:**

- ◆ They are referred to as the **'Medical Food of the 21st Century'**. **Hence, statement 1 is correct.**
- ◆ Seaweeds are found mostly in the **intertidal region**, in shallow and deep waters of the sea and also in estuaries and backwaters.
- ◆ Large seaweeds form dense **underwater forests** known as **kelp forests**, which act as underwater nurseries for fish, snails and sea urchins. **Hence, statement 2 is correct.**
- ◆ India boasts approximately **844** reported seaweed species in its seas.
- ◆ They act as **bio-indicator** by absorbing excess nutrients and signaling marine chemical damage. **Hence, statement 3 is correct.**

23. Ans: B

Exp:

Recently, the **Ministry of Environment, Forest and Climate Change** announced that on the eve of **World Wetlands Day, 2024**, India has increased its tally of **Ramsar sites to 80 from the existing 75** by designating five more wetlands as **Ramsar sites**.

- Three of these sites, **Ankasamudra Bird Conservation Reserve, Aghanashini Estuary, and Magadi Kere Conservation Reserve** are located in **Karnataka**. Hence, **pair 1 is correctly matched**.
- Whereas two, **Karaivetti Bird Sanctuary and Longwood Shola Reserve Forest** are in **Tamilnadu**. Hence, **pair 2 is correctly matched but pair 3 is not correctly matched**.
 - ◆ **Tamil Nadu** continues to have the maximum number of **Ramsar Sites** (16 sites) followed by **Uttar Pradesh** (10 sites).

24. Ans: D

Exp:

- The Dusted Apollo butterfly was discovered in **1890** and its distribution range extends from **Ladakh to West Nepal**, flying between **3,500 to 4,800 meters** in the inner Himalayas. Hence, **statement I is not correct**.
- It is a member of the **snow Apollo genus (Parnassius) of the swallowtail family**. Hence, **statement II is correct**.
 - ◆ The Dusted Apollo species closely resembles **Ladakh Banded Apollo (Parnassius stoliczkanus)** but the **discal band (band on a butterfly's wing)** on the upper fore wing in dusted Apollo is complete and extends from costa to vein one while this discal band is incomplete and extends only up to vein four in Ladakh Banded Apollo.
- Hence, **option D is correct because** Statement-I is not correct, but Statement-II is correct.

25. Ans: B

Exp:

- The **Royal Bengal Tigers** of Similipal boast a distinctive lineage with elevated melanin levels, giving rise to black and yellow interspersed stripes, making them pseudo-melanistic. Hence, **statement-I is correct**.
 - ◆ Odisha is set to unveil the world's first melanistic tiger safari near the Similipal Tiger Reserve (STR).
- **Melanism** is a genetic condition, that results in increased melanin production, leading to black or nearly black skin, feathers, or hair in animals. Hence, **statement-II is correct**.
- Hence, option B is correct because both Statement-I and Statement-II are correct but Statement-II is not the correct explanation for Statement-I.

26. Ans: A

Exp:

Sea Cows:

- Sea cows, comprising **manatees** and **dugongs**, consist of four manatee species and one dugong species, belonging to the herbivorous **Dugongidae family**.
- **Manatees** dwell in zones such as the Caribbean, Gulf of Mexico, Amazon, East and West Africa. Hence, **statement 1 is not correct**.
- Dugongs inhabit coastal regions of the Indian and Pacific Oceans. Hence, **statement 2 is not correct**.
- **IUCN Status: Manatees and dugongs are both Vulnerable**. Hence, **statement 3 is correct**.

27. Ans: B

Exp:

Convention on Biological Diversity (CBD):

- The **CBD, a legally binding treaty to conserve biodiversity has been in force since 1993 which has 3 main objectives**:
 - ◆ The conservation of biological diversity.
 - ◆ The sustainable use of the components of biological diversity.
 - ◆ The fair and equitable sharing of the benefits arising out of the utilization of genetic resources. Hence, **statement 1 is not correct**.
- India enacted Biological Diversity Act, 2002 to give effect to the provisions of the CBD. Hence, **statement 2 is correct**.
- The **CBD Secretariat** is based in **Montreal, Canada** and it operates under the United Nations Environment Programme. Hence, **statement 3 is correct**.

28. Ans: C

Exp:

Water (Prevention and Control of Pollution) Amendment Bill, 2024:

- **Major Amended Provisions**:
 - ◆ **Decriminalisation of Minor Offences**: It focuses on decriminalising minor offences related to water pollution, alleviating fears of imprisonment for technical or procedural lapses.
 - The rationale is to ensure penalties align with the severity of offences, promoting compliance without overly burdening stakeholders.
 - Hence, **statement 1 is correct**.

- ◆ **Exemption for Certain Industrial Plants:** The amended bill empowers the central government to exempt specific categories of industrial plants from certain statutory restrictions, such as those outlined in Section 25 regarding the establishment of new outlets and discharges.
 - This provision intends to streamline regulatory processes and reduce duplication of surveillance efforts, and alleviate unnecessary burdens on regulatory agencies, promoting efficiency.
- ◆ **Enhanced Regulatory Oversight:** It introduces measures to enhance regulatory oversight and standardisation across states.
 - It grants the central government authority to prescribe guidelines for the nomination of chairpersons of State Pollution Control Boards and issue directives regarding the grant, refusal, or cancellation of industry-related consents. **Hence, statement 2 is correct.**
 - It provides certain mandatory qualifications, experience, and procedures to ensure fair appointment of chairpersons.

29. Ans: C

Exp:

Global Biodiversity Framework Fund:

- It is designed to spur and **expedite investment** in the conservation and sustainability of wildlife and ecosystems, which are threatened by wildfires, flooding, extreme weather, and human activities such as urban sprawl. **Hence, statement 1 is correct.**
- It will be managed by the **Global Environment Facility (GEF)** and will raise funds through private, philanthropic and government investments. **Hence, statement 2 is correct.**

30. Ans: D

Exp:

28th Conference of Parties:

- The 28th Conference of Parties (COP-28) took place in Dubai, UAE, with representatives from 197 countries presenting their initiatives to curb global warming and engaging in discussions on future climate actions. **Hence, statement 1 is correct.**
- ◆ **Declaration to Triple Nuclear Energy:** The declaration launched at COP28 aims to triple global nuclear energy capacity by 2050. **Hence, statement 2 is correct.**

- The conference yielded a mix of positive outcomes and disappointments, marking a substantial step forward since the Paris Agreement.

About COPs:

- COPs are gatherings held within the framework of the United Nations Framework Convention on Climate Change (UNFCCC), a multinational treaty established in 1992.
- These meetings, denoted by the acronym COP, serve as the official sessions of the Conference of the Parties.
 - ◆ During these sessions, participating countries (Parties) **evaluate global endeavors aligned with the primary goal of the Paris Agreement**, aiming to restrict global warming to approximately 1.5 °C above pre-industrial levels.
- The COPs are the **main decision-making body of the UNFCCC.**
- They adopt decisions and resolutions on various aspects of climate action, such as mitigation, adaptation, finance, technology, and transparency.

31. Ans: B

Exp:

- India's **Nationally Determined Contributions (NDCs)**, or its self-defined climate pledges under the Paris Agreement, for 2030 would require Rs 30 lakh crore of investments.
 - ◆ According to India's NDC goals, India pledges to reduce the emissions intensity of its GDP (Gross Domestic Product) by **45% by 2030**, from the 2005 level, and achieve about **50% cumulative** electric power installed capacity from non-fossil fuel-based energy resources by 2030. **Hence, statement I is correct.**
- **"PM Surya Ghar Muft Bijli Yojana,"** a rooftop solar scheme backed by an investment exceeding Rs. 75,000 crores, aims to **solarize 1 crore** households by providing up to 300 units of free electricity every month. **Hence, statement II is correct.**
 - ◆ The scheme not only provides substantial benefits but also fosters awareness about renewable energy, contributing to India's ambitious goal of achieving Net-Zero emissions by 2070 and Energy Independence by 2047.

Hence, option B is correct because both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement I.



32. Ans: A

Exp:

CMS (Convention on the Conservation of Migratory Species of Wild Animals):

- **About:**
 - ◆ It is an intergovernmental treaty under the UNEP (United Nations Environment Programme)-**popularly known as Bonn Convention. Hence, statement 1 is correct.**
 - ◆ It was signed in 1979 and in force since 1983.
 - ◆ As of 1st March 2022, the CMS has 133 Parties.
 - India has also been a party to CMS since 1983.
- **Aim:**
 - ◆ It aims to conserve terrestrial, marine and avian migratory species throughout their range.
 - ◆ It lays the legal foundation to conduct conservation measures on a global scale. **Hence, statement 2 is correct.**
- **Two appendices under CMS:**
 - ◆ **Appendix I** lists 'Threatened Migratory Species'.
 - ◆ **Appendix II** lists 'Migratory Species requiring international cooperation'.
- **India and the CMS:**
 - ◆ India has signed a **non-legally binding** Memorandum of Understanding (MoU) with CMS on conservation and management of Siberian Cranes (1998), Marine Turtles (2007), Dugongs (2008), and Raptors (2016). **Hence, statement 3 is not correct.**

33. Ans: A

Exp:

- The Thanthai Periyar Wildlife Sanctuary spans 80,114.80 hectares in the Bargur Hills of Erode district, Tamil Nadu. **Hence, statement 1 is correct.**
- Positioned at the junction of the **Eastern Ghats and the Western Ghats**, the sanctuary boasts rich biodiversity.
- The region is a significant part of the **Nilgiris Elephant Reserve**, housing a healthy population of elephants and **Indian Gaur. Hence, statement 2 is correct.**
- It serves as the catchment area for the **Palar River**, which feeds into the Cauvery River, supporting agricultural activities. **Hence, statement 3 is not correct.**

34. Ans: A

Exp:

Indian Institute of Tropical Meteorology (IITM):

- IITM is a scientific institution based in **Pune, Maharashtra.**
- It specializes in expanding research related to tropical meteorology, with a special focus on the tropical Indian Ocean. Key areas of study include monsoon meteorology and air-sea interactions in the South Asian climate. **Hence, statement 1 is correct.**
- IITM operates as an autonomous institute under the **Ministry of Earth Sciences**, Government of India. **Hence, statement 2 is not correct.**

35. Ans: A

Exp:

Recently, a group of birdwatchers spotted an **African-Mediterranean wader bird, the Spur-winged Lapwing (*Vanellus spinosus*)**, at Ammavaripet Lake in Warangal, Telangana. It is believed to be the first time the bird has been spotted in India.

- **Family: Spur-winged Lapwing belongs to the family of Charadriidae. Hence, statement 1 is correct.**
- **Range: Central, Sub-Saharan Africa; eastern Mediterranean. Hence, statement 2 is correct.**
- **IUCN Red List Category: Least Concern. Hence, statement 3 is not correct.**
- **Diet: Carnivore - Primarily insects, insect larvae, and small invertebrates.**
- **Active: Diurnal - Variably diurnal or nocturnal.**
 - ◆ Spur-winged lapwings are active day and night, depending on the concentration of prey and predators in a given area.

36. Ans: C

Exp:

Researchers at the **Indian Institute of Science (IISc)** in Bengaluru have created a synthetic human antibody capable of neutralizing a powerful **neurotoxin** produced by **Elapidae snakes**, such as the cobra, **King Cobra, Krait, and Black Mamba.**

- **Elapids**, a diverse family of **venomous snakes**, have hollow, front fangs that deliver venom and include **300 species** across various **habitats globally.**
- Hence, option C is correct.

37. Ans: B

Exp:

● **United Nations Environment Assembly:**

- ◆ It is the governing body of the UN Environment Programme (UNEP).
- ◆ It is the world's highest-level decision-making body on the environment. **Hence, statement 1 is correct.**

- ◆ The Assembly is made up of the 193 UN Member States and convenes every **two years** to advance global environmental governance. **Hence, statement 2 is not correct.**
- ◆ It was created in June 2012, during the United Nations Conference on Sustainable Development, also referred to as RIO+20. **Hence, statement 3 is correct.**

38. Ans: A

Exp:

Kunming-Montreal Global Biodiversity Framework:

- The Kunming-Montreal Global Biodiversity Framework (GBF) was adopted during the fifteenth meeting of the Conference of the Parties (COP)-15 of CBD following a four year consultation and negotiation process. **Hence, statement 1 is correct.**
- This historic Framework, which supports the achievement of the Sustainable Development Goals and builds on the Convention's previous Strategic Plans, sets out an ambitious pathway to reach the global vision of a world living in harmony with nature by 2050. **Hence, statement 2 is not correct.**
- Kunming Biodiversity Fund-
 - ◆ China has also pledged to inject USD 233 million into a new fund to protect biodiversity in developing countries. The fund is being referred to by China as Kunming Biodiversity Fund.
 - ◆ Further, some rich country donors say a new fund for conservation is unnecessary because the United Nations' Global Environment Facility already helps developing nations finance green projects.

39. Ans: C

Exp:

Ankasamudra Bird Conservation Reserve:

- It is a human-made village irrigation tank built centuries back and is spread over an area of 244.04 acres adjoining the Ankasamudra village, Karnataka.
- It is an **important Protected area** and only bird conservation reserve of Dry zone (Northern Karnataka), which inhabits both native and migratory bird species.
- In 2017, it was **declared as a Conservation Reserve** for the protection and conservation of resident and migratory aquatic birds, under section 36-A of the Wildlife (Protection) Act, 1972. **Hence, statement 1 is correct.**
- The reserve supports more than 1% of the biogeographic population of Painted Stork and Black-headed Ibis. **Hence, statement 2 is correct.**

40. Ans: C

Exp:

Snow leopards :

- Recently, **Kyrgyzstan** has officially declared the **Snow Leopard (*Panthera uncia*)** as its national symbol, signifying its commitment to conservation and ecological balance.
- Snow leopards are **vital for ecological balance**, inhabiting 1/3 of the global territory. A decline in their population poses risks to various species.
 - ◆ Adapted to high-altitude terrains, their unique physique ensures agility in steep, rugged environments.
 - ◆ Major Sites as significant habitats for Snow Leopards :
 - Hemis National Park, Ladakh. **Hence, option 1 is correct.**
 - Great Himalayan National Park, Himachal Pradesh. **Hence, option 2 is correct.**
 - Gangotri National Park, Uttarakhand.
 - Khangchendzonga National Park, Sikkim. **Hence, option 3 is correct.**

41. Ans: A

Exp:

- India boasts two wolf subspecies, the **grey wolf (*Canis lupus pallipes*)** in the **peninsular region** and the **Himalayan or Tibetan wolf (*Canis lupus chanco*)** in the north. **Hence, statement 1 is correct.**
- The **range of grey wolf** stretches across several states, including **Gujarat, Rajasthan, Uttar Pradesh, Madhya Pradesh, Maharashtra** among others.
- The **Himalayan wolf** is primarily found in the **Ladakh region** and the **Lahaul and Spiti region of northeastern Himachal Pradesh** among others.
- The IUCN designates the **gray wolf** as **least concern**, whereas the **Himalayan wolf** is classified as **vulnerable**. **Hence, statement 2 is not correct.**

42. Ans: B

Exp:

Biodiversity Credit Alliance:

- The **Biodiversity Credit Alliance** was launched at **CoP15 of CBD** to promote Bio credits. **Hence, statement 1 is not correct.**
- Through 2023, efforts were made to promote them at different fora. They were discussed at **CoP28 of the UNFCCC in Dubai** in December 2023.
- It aims to **mobilize support and generate awareness** among various stakeholders, including governmental bodies, non-profits, and private enterprises. **Hence, statement 2 is correct.**



43. Ans: B

Exp:

- **Buxa Tiger Reserve (BTR) in West Bengal** witnessed the return of a tiger **for the second time** in two years after a 23-year absence, sparking hope for a flourishing ecosystem and a potential resurgence of tiger populations.
- The northern boundary of Buxa Tiger Reserve runs along the international border with Bhutan. **Hence, statement 1 is correct.**
- The Eastern boundary touches that of the Assam State. **Hence, statement 2 is not correct.**
- The Sinchula hill range lies all along the northern side of Buxa National Park. **Hence, statement 3 is correct.**

44. Ans: D

Exp:

- The Wetland City Accreditation (WCA) is a voluntary accreditation system established by the **Ramsar Convention** during the **Conference of the Contracting Parties (COP) 12, 2015** to recognize cities that have taken exceptional steps to safeguard their urban wetlands. **Hence, statement 1 is not correct.**
- The scheme aims to promote the **conservation and wise use of urban and peri-urban wetlands**, as well as sustainable socio-economic benefits for local populations. **Hence, statement 2 is correct.**

45. Ans: C

Exp:

Cheetah Reintroduction Project:

- The **Cheetah Reintroduction Project** in India formally commenced on **September 17, 2022**, with the objective of restoring the population of cheetahs, which were declared extinct in the country in 1952. **Hence, statement 1 is correct.**
- The project involves the **translocation of cheetahs** from **South Africa and Namibia** to Kuno National Park in Madhya Pradesh. **Hence, statement 2 is correct.**

46. Ans: C

Exp:

About Darjeeling Zoo:

- The Padmaja Naidu Himalayan Zoological Park (PNHZA), West Bengal also commonly known as Darjeeling zoo has achieved international recognition from the World Association for Zoos and Aquariums (WAZA) for its successful conservation breeding programme (CBC) for snow leopards.
- Darjeeling Zoo has the only conservative breeding programme for snow leopards in India. **Hence, statement 1 is correct.**
- Darjeeling zoo is the largest high altitude zoo in India. **Hence, statement 2 is correct.**

47. Ans: B

Exp:

- **Eucalyptus snout beetle** (*Gonipterus platensis*) is a leaf-feeding beetle that is a major defoliator of eucalypts, according to the Food and Agriculture Organization of the United Nations.
 - ◆ The pest is indigenous to **Australia** but occurs in many countries throughout the world where eucalypts are grown. **Hence, statement 1 is not correct.**
- It can cause damage over vast areas as it has a great flight capability and gets transferred with transport of forest products. **Hence, statement 2 is correct.**
 - ◆ The beetle feeds on leaves, buds and shoots, resulting in stunted growth and defoliation and causing heavy losses.

48. Ans: C

Exp:

- The Ministry of Environment, Forest and Climate Change announced the merger of the two flagship programmes Project Tiger (PT) and Project Elephant as Project Tiger and Elephant (PTE). **Hence, statement 1 is correct.**
- The Wildlife Protection (Amendment) Act, 2006 didn't prohibit the diversion of a "tiger's forest" for development projects and allowed wildlife to be killed as a last resort if they threatened human lives. **Hence, statement 2 is correct.**
- Project Tiger is a wildlife conservation initiative in India that was launched in 1973. **Hence, statement 3 is correct.**
 - ◆ The primary objective of Project Tiger is to ensure the survival and maintenance of the tiger population in their natural habitats by creating dedicated Tiger Reserves.

49. Ans: B

Exp:

Salt-water Crocodiles:

- **About: The saltwater crocodile is the largest of all crocodilians, and the largest reptile in the world.**
 - ◆ **The Nile Crocodile is the second largest reptile globally** and is native to various regions in Africa. **Hence, statement 1 is not correct.**
- **Distribution: Tropical to warm temperate latitudes in the eastern Indian and western Pacific oceans.**



- **Habitat: Mangrove forests and other coastal habitats**
 - ◆ **Bhitarkanika** is the **second-largest mangrove forest in India after the Sundarbans** in West Bengal. Both areas are among the three strongholds of saltwater crocodiles, the third being the **Andaman and Nicobar Islands**. Hence, **statement 2 is correct**.
- **Conservation Status:**
 - ◆ **IUCN Red list:** Least Concern
 - ◆ **WPA, 1972:** Schedule I
 - ◆ **CITES:** Appendix I/II

50. Ans: B

Exp:

- Scientists have mapped the largest known **deep-sea coral reef**, located off the **Atlantic coast** of the **United States**. Hence, **statement 1 is not correct**.
 - ◆ The reef spans approximately **500 km** in length, stretching from **Florida to South Carolina**. At certain points, its width reaches up to **110 km**.
 - The reef's area is almost three times larger than **Yellowstone National Park**.
- The largest coral reef system in Shallow water is the **Great Barrier Reef** located on the northeast coast of Australia. Hence, **statement 2 is correct**.

51. Ans: C

Exp:

About Wandering Albatross (*Diomedea exulans*):

- Wandering Albatross is the **largest flying bird with a wingspan of 3.5 metres**. It spends most of its 60-year lifespan at sea. Hence, **statement 1 is correct**.
 - ◆ Primarily found in the Southern Ocean and surrounding islands, with Marion and Prince Edward Islands supporting half of the world's breeding population.
 - ◆ It breeds approximately every two years on land after reaching sexual maturity.
- It is **Vulnerable as per IUCN Red list**, facing threats like bycatch from longline fishing trawlers, pollution and climate change. Hence, **statement 2 is correct**.

52. Ans: C

Exp:

Kaziranga National Park:

- Formed in 1908, KNP is located on the edge of the northeastern part of the country, in the districts of **Golaghat and Nagaon in the state of Assam**. It is the single largest undisturbed and representative area in the Brahmaputra Valley floodplain. Hence, **statement 1 is correct**.

- Recently, a wildlife photographer captured a rare golden tiger in Kaziranga National Park (KNP). Golden tiger spotted in KNP are a color variation of Bengal tigers caused by a recessive gene called "wideband". Hence, **statement 2 is correct**.

53. Ans: A

Exp:

National Board for Wildlife (NBWL) :

- The National Board for Wildlife is the **apex body in India for all wildlife-related matters**. Hence, **statement 1 is correct**.
- It is a **statutory body** constituted under Section 5A of the Wildlife (Protection) Act, 1972. Hence, **statement 2 is not correct**.
- It advises the government on policy matters concerned with wildlife conservation and preservation, and approves projects in and around national parks and other protected areas.
- The NBWL is **chaired by the Prime Minister** and comprises 47 members, including three Members of Parliament, five NGOs, and 10 eminent ecologists, conservationists, and environmentalists. Hence, **statement 3 is not correct**.

54. Ans: A

Exp:

Scientists have mapped the largest known **deep-sea coral reef**, located off the **Atlantic coast** of the **United States**.

- Unlike the recently found coral reef which is the largest in deep water, the **Great Barrier Reef is the largest coral reef system in Shallow water**. Hence, **statement 1 is not correct**.
- Discovered at depths ranging from 200 to 1,000 meters, **the deep sea coral reef exists in areas beyond the reach of sunlight**. Hence, **statement 2 is correct**.
- Deep-sea coral reefs feed on organic matter that rains down from surface waters into the deep. Hence, **statement 3 is correct**.

55. Ans: A

Exp:

Himalayan Wolf:

- **About:**
 - ◆ **The Himalayan Wolf is a mysterious lupine predator** that inhabits the high elevations of the Himalayas. Hence, **statement 1 is correct**.
 - ◆ Characterized by distinctive genetic markers, its mitochondrial DNA suggests a genetic foundation predating the Holarctic grey wolf.



- **Habitat:**

- ◆ It is found in parts of **China, Nepal, India, and Bhutan** and typically lives in alpine meadows and grasslands at elevations of 10,000 to 18,000 feet. Hence, **statement 2 is correct.**

- **Conservation Status:**

- ◆ **IUCN Status:** Vulnerable. Hence, **statement 3 is not correct.**
- ◆ **Wildlife Protection Act, 1972:** Schedule I

56. Ans: A

Exp:

- **Rhododendron** is a large genus of woody plants comprising approximately **1,000 species**. Hence, **statement 1 is correct.**
- These plants are characterised by their showy flowers that come in various colours such as **white, pink, red, orange, and purple**. Hence, **statement 2 is correct.**
- A total of 87 species, 12 subspecies and 8 varieties of Rhododendrons recorded in the **Indian Himalayan Region**. Hence, **statement 3 is not correct.**
- **Rhododendron arboreum** is the **state flower of Nagaland**. The traditional belief in the state is that consuming rhododendron petals can help **remove fish bones stuck in one's throat**.
 - ◆ However, **rampant deforestation, habitat destruction, and threats** from pests have rendered many species vulnerable.

57. Ans: A

Exp:

Snow Leopard

- **Scientific Name:** *Panthera uncia*
- **Top Predator:** Snow leopards act as an indicator of the health of the mountain ecosystem in which they live, due to their position as the top predator in the food web.
- **Protection Status:**
 - ◆ It is listed in the **Vulnerable category** of the **IUCN List of Threatened Species**. Hence, **statement 1 is correct.**
 - ◆ It is listed in the **Schedule-I of Indian Wildlife (Protection) Act, 1972**. Hence, **statement 2 is not correct.**

58. Ans: C

Exp:

- The **Wild Life (Protection) Act, 1972** provides a **legal framework** for the **protection of various species** of wild animals and plants, management of their habitats, regulation, and control of trade in wild animals, plants, and products made from them.

- ◆ The **Wildlife (Protection) Act (WLPA) of 1972 laid the groundwork for tiger conservation**. It established **National Parks and Wildlife Sanctuaries**, segregating rights in favor of State governments and introducing the **concept of Critical Tiger Habitats (CTH)**. Hence, **statement-I is correct.**

- The **Forest Rights Act (FRA)** introduced a '**Critical Wildlife Habitat**' (CWH), similar to the **Critical Tiger Habitat (CTH)** under the **Wildlife Protection Act (WLPA)**. Hence, **statement-II is not correct.**

- ◆ However, a **key difference** was that **once a CWH was notified, it couldn't be redirected for non-forestry purposes**. This particular clause was insisted upon by **Adivasi movements** during negotiations.

- Hence, **option C is correct.**

59. Ans: B

Exp:

- **Study has been published titled-Balancing climate goals and biodiversity protection: legal implications of the 30x30 target for land-based carbon removal, highlighting the conflicts between land-based Carbon Dioxide Removal (CDR) Strategies**. Hence, **Statement 1 is correct.**
- Nations have committed to the **"30x30"** biodiversity target to safeguard **30% of the world's terrestrial and marine areas by 2030**. Hence, **statement 2 is correct.**
- Both statements are correct but **statement-II is not the correct explanation of Statement-I.**
- Hence, **option B is correct.**

60. Ans: C

Exp:

- Pelagic birds spend a **large portion of their lives on the open ocean**. Hence, **statement 1 is correct.**
 - ◆ They can be found thousands of miles offshore but can get blown onto land during high winds and storms. The only other time they come inland is to breed.
- Pelagic birds possess **remarkably long, slender wings** enabling extended flights without rest. Hence, **statement 2 is correct.**
- These birds feature a unique **salt gland that extracts salt from seawater, preventing its accumulation to toxic levels**. Hence, **statement 3 is correct.**
 - ◆ They feed on planktonic crustaceans (related to shrimp and crabs), and squid and hunt fish far from land.

61. Ans: C

Exp:

- The NGT was established in **October, 2010**, under the **National Green Tribunal Act 2010**. Hence, **statement 1 is not correct**.
- The Chairperson is appointed by the **Central Government** in consultation with the **Chief Justice of India (CJI)**. Hence, **statement 2 is not correct**.
- It operates independently of the **procedural rules laid down in the Code of Civil Procedure, 1908**, guided instead by principles of **natural justice**. Hence, **statement 3 is not correct**.

62. Ans: (c)

Exp:

- Every year, the **United Nations** celebrates 5th December as **World Soil Day**. WSD is celebrated to commemorate the birthday of the late King of Thailand Bhumibol Adulyadej for his lifelong commitment to raising awareness of the importance of sustainable soil management and rehabilitation for food security, poverty alleviation and more. Hence, **statement 1 is correct**.
- WSD was recommended by the **International Union of Soil Sciences (IUSS)** in 2002. Hence, **statement 2 is correct**.
- The theme for 2023 is "Soil and Water, a Source of Life." It highlights the importance of these natural resources for sustaining life on Earth. Soil and water are essential for agriculture, ecosystems, and human well-being. Hence, **statement 3 is correct**.

63. Ans: (c)

Exp:

- The **Kiwi** is a **flightless** bird endemic to New Zealand. This is known for its **eccentric traits** such as being **nocturnal, flightless**, and having mouse-like whiskers and dinosaur-like legs. Hence, **statement 1 is correct**.
- **Kiwi** is especially found in the **Australian Continent**. The International Union for Conservation of Nature (IUCN) categorizes it as "Vulnerable." Hence, **statement 2 is correct**.
- **New Zealand's Capital Kiwi Project** is a **community-led initiative** that aims to restore a large-scale wild kiwi population. Hence, **statement 3 is correct**.

64. Ans: D

Exp:

National Mission for Clean Ganga (NMCG):

- This mission was established on 12th August 2011 under the Societies Registration Act, 1860 as a registered society. Hence, **statement 1 is not correct**.

- The National Mission for Clean Ganga (NMCG) is implemented by the National Council for Rejuvenation, Protection and Management of River Ganga also known as the National Ganga Council.

◆ It is **headed by Prime Minister**. Hence, **statement 2 is not correct**.

65. Ans: A

Exp:

- **Baboons** are **Old World** monkeys that are part of the genus *Papio*.
- *Papio anubis* and *Papio hamadryas* are both species of baboons. *Papio anubis* is the most broadly distributed baboon species, ranging through most of **central sub-Saharan Africa**. *Papio hamadryas* is found on the African continent in the area of the southern Red Sea, in Ethiopia, Somalia, and Eritrea. Hence, **statement 1 is correct**.
- The **IUCN Red List** rates them "**Lower Risk, Least Concern**." Hence, **statement 2 is not correct**.

66. Ans: C

Exp:

- Recently, the Indian Prime Minister announced at the **G20 Energy Ministers' meeting that India has rolled out 20% ethanol-blended petrol in 2023** and aims to cover the **entire country by 2025**. Hence, **statement 1 is correct**.
- **India's ethanol production has diversified from cane molasses to various feedstocks** like rice, maize, and other grains.
- **Ethanol yields from grains are higher compared to molasses**, with rice producing 450-480 liters and other grains 380-460 liters per tonne. Hence, **statement 2 is correct**.

67. Ans: A

Exp:

- **Scimitar-horned oryx is a desert antelope**. They are mostly white with reddish brown necks and marks on the face and a long, dark, tufted tail. The white coat helps reflect the heat of the desert.
 - ◆ In addition to this physiological adaptation to hot and arid environments, they can go for long periods without drinking water. They dissipate heat through their appendages.
- Recently, It was **moved from Extinct in the Wild to Endangered in IUCN Red list**, showcasing successful reintroduction efforts in the Republic of Chad.
- Hence, **option A is correct**.





68. Ans: B

Exp:

- **Extended Producer Responsibility (EPR) Mechanism:**
 - ◆ EPR is a policy approach in waste management that makes producers **responsible for the entire lifecycle of their products**, including their collection, recycling, and disposal.
 - It aims to reduce the **environmental impact of products** by shifting the financial and physical burden of waste management **from governments and taxpayers to producers**. Hence, **statement 1 is not correct**.
- The **'polluter pays' principle** is the commonly accepted practice that those who produce pollution should bear the costs of managing it to prevent damage to human health or the environment. Hence, **statement 2 is correct**.

69. Ans: A

Exp:

Wild Yak:

- **About:**
 - ◆ The wild yak, known as *Bos grunniens* or *Bos mutus*, thrives in remote areas within the **Tibetan plateau**, specifically inhabiting high-elevation alpine tundra, grasslands, and cold deserts.
 - ◆ The **Convention on Migratory Species (CMS)** reports that native wild yak population, while previously also found in Bhutan and Nepal, is now presumed extinct in those regions, limiting their current habitat to **China and India**. Hence, **statement 1 is not correct**.

- **Conservation Status:**

- ◆ **The Wild Life (Protection) Amendment Act 2022:** Schedule I. Hence, **statement 2 is correct**.
- ◆ **IUCN Red list status:** Vulnerable. Hence, **statement 3 is not correct**.
- ◆ **CITES:** Appendix I of CITES

70. Ans: C

Exp:

Recently, a Namdapha flying squirrel (*Biswamoyopterus biswasi*) has resurfaced in Arunachal Pradesh after going missing for 42 years.

- It is a **rare nocturnal flying squirrel species** found in the **Namdapha Tiger Reserve** in Arunachal Pradesh, India. Hence, **statement 1 is correct**.



- It is **distinct from the red giant flying squirrel (Petaurista petaurista)**, another species in the same ecosystem, primarily due to the prominent tuft of hair on its ears.
- The difficulty in locating this species led to concerns that it might have been mistaken for the **red giant flying squirrel or, worse, faced extinction**.

- **Protection Status:**

- ◆ **IUCN Red List:** Critically Endangered
- ◆ **Wildlife (Protection) Amendment Act, 2022:** Schedule I.
- ◆ Hence, **statement 2 is correct**.

71. Ans: B

Exp:

Valmiki Tiger Reserve:

- The VTR is the **only tiger reserve in Bihar**, which forms the easternmost extent of the **Himalayan Terai forests** in India. Hence, **statement 1 is correct**.
 - ◆ The VTR is located in **Bihar's West Champaran district**, bordering **Nepal** to its north and **Uttar Pradesh** to its west.

- Situated in the **Gangetic plains bio-geographic region**, the vegetation of this Tiger Reserve is a combination of **Bhabar and Terai regions**. Hence, **statement 2 is correct**.
- Wild mammals found in the forests of **Valmiki Tiger Reserve** include **tiger, sloth bear, leopard, wild dog, bison, wild boar** etc.
- **Rivers Gandak, Pandai, Manor, Harha, Masan and Bhapsa** flow through various parts of the reserve. Hence, **statement 3 is not correct**.

72. Ans: (b)

Exp:

- **Maharashtra has recorded the highest number of tiger fatalities** with 52 deaths, prompting apprehensions regarding the adequacy of conservation measures in the state. Hence, **statement 1 is not correct**.
- Tamil Nadu and Kerala recorded 15 tiger deaths each, reflecting a widespread issue across regions. **Karnataka, with the second-highest tiger population**, reported 13 deaths. Hence, **statement 2 is correct**.
- According to the **International Union for the Conservation of Nature (IUCN)**, the tiger has gone extinct in **Cambodia, Laos, and Vietnam** due to poaching and habitat loss. This is a tragic loss for the world's biodiversity. However, there are still efforts being made to conserve the tiger population in other countries. India, for example, is home to 75% of the world's tiger population. Hence, **statement 3 is correct**.

73. Ans: D

Exp:

Black Tigers in Similipal Tiger Reserve:

The Indian government informed the Rajya Sabha that there are 10 black tigers (melanistic tigers) in India, all of which are exclusively found in Odisha's Similipal tiger reserve.

- **Black Tigers are not a distinct species but a rare colour variant of Bengal Tiger**. The coat colour and patterning of black tigers are due to a single mutation in the Transmembrane Aminopeptidase Q (Taqppe) gene. This mutation is called **pseudo-melanism**. Hence, **statements 1 and 2 are correct**.
- Similipal Tiger Reserve was designated in 1956, part of Project Tiger since 1973, and declared a biosphere reserve in 1994.
 - ◆ It is part of the UNESCO World Network of Biosphere Reserves and the Similipal-Kuldiha-Hadgarh Elephant Reserve popularly known as Mayurbhanj Elephant Reserve.

- ◆ Similipal is rich in wildlife, housing tigers, elephants, different bird and amphibian species.
- ◆ Two tribes, Erenga Kharias and Mankirdias, inhabit Similipal and engage in traditional agricultural activities.

● Factors for Occuring Black Colour:

- ◆ **Due to Geographic Isolation**, genetically related individuals have been mating with each other for many generations in Similipal, leading to inbreeding.
 - It should be noted that this has important implications for tiger conservation as such isolated and inbred populations are prone to extinction over even short periods of time. Hence, **statement 3 is correct**.

74. Ans: B

Exp:

- **About: The European wood bison (Bison bonasus) stands as the largest and heaviest terrestrial mammal in Europe**. Hence, **statement 1 is not correct**.
- **Habitat: Thriving in grasslands, deciduous, and mixed forests**,
 - ◆ Noteworthy for its role as an **ecosystem engineer**, the wisent plays a crucial part in **restoring grassland habitats**. Hence, **statement 2 is correct**.
- **Distribution: Belarus; Lithuania; Poland; Russian Federation; Slovakia; Ukraine**
- **IUCN Red List Status: Near Threatened**. Hence, **statement 3 is correct**.
- **Threats: Rapid environmental change and hunting by humans were the main drivers of the wisent's extirpation across Europe**.

75. Ans: B

Exp:

- The **Bonnet Macaque (Macaca radiata)** is a species of **Old World monkey**. They are gray-brown in color, have large ears, wrinkly faces, and a mop of hair on their heads that is parted in the middle.
- The bonnet macaque gets its name from the whorls of hair on the crown of its head that resemble a cap or bonnet. Hence, **statement 1 is correct**.
- **Bonnet macaques are endemic commensals: they are found only in peninsular India and live in close proximity with humans**. Hence, **statement 2 is correct**.
- **IUCN Status: Vulnerable**. Hence, **statement 3 is not correct**.



76. Ans: D

Exp:

- Goldfish was one of the earliest fish to be domesticated and a relatively small member of the **Carp family**. Hence, **Statement 1 is correct**.
- Releasing it into the **wild can lead to giant sizes, making them invasive** and harmful to native marine life, damaging fragile ecosystems.
- It can eat almost anything and everything, including **algae, aquatic plants, eggs, and invertebrates**. Hence, **Statement 2 is correct**.
- They can tolerate a **wide range of water temperatures**, reach **sexual maturity quickly**, and **reproduce several times** in one season. Hence, **Statement 3 is correct**.
- **Feral goldfish** are also destructive, as they help spawn harmful algal blooms by consuming the algae and expelling nutrients that promote its growth.

77. Ans: A

Exp:

- **About Kiwi:**
 - ◆ The **Kiwi** is a **flightless** bird endemic to **New Zealand**. Hence, **statement 1 is not correct**.
 - ◆ This is known for its **eccentric traits** such as being **nocturnal, flightless**, and having mouse-like whiskers and dinosaur-like legs. Hence, **statement 2 is correct**.
 - ◆ International Union for Conservation of Nature (IUCN) Status: **Vulnerable**.

Hence, **statement 3 is not correct**.

78. Ans: C

Explanation:

Global Warming Potential (GWP)

- GWP is a measure of how much heat a greenhouse gas traps in the atmosphere over a specific time period, **usually 100 years**, compared to carbon dioxide (CO₂). Hence, **statement 1 is correct**.

- It is used to evaluate the potential impact of different greenhouse gases on global warming. The GWP allows for the comparison of the warming effects of various gases based on their ability to absorb and retain heat in the atmosphere.
- **Carbon dioxide is the reference gas with a GWP of 1**. Other greenhouse gases, such as **methane (CH₄) and nitrous oxide (N₂O)**, have **higher GWPs** because they are more effective at trapping heat. Hence, **statement 2 is correct**.
- The **Intergovernmental Panel on Climate Change (IPCC)** provides GWP values for different gases. It's important to note that GWP values can vary depending on the time horizon chosen for the comparison. Hence, **statement 3 is correct**.

79. Ans: B

Exp:

World Meteorological Organization (WMO):

- **About:**
 - ◆ It is an **intergovernmental organization** with a membership of 192 Member States and Territories. India is a member. Hence, **Statement 1 is correct**.
 - ◆ It originated from the International Meteorological Organization (IMO), which was established after the 1873 Vienna International Meteorological Congress. Hence, **statement 2 is correct**.
- **Establishment:**
 - ◆ Established by the ratification of the **WMO Convention on 23rd March 1950**, WMO became the **specialized agency of the United Nations** for meteorology (weather and climate), operational hydrology and related geophysical sciences. Hence, **statement 3 is correct**.
- **Headquarters:**
 - ◆ Geneva, Switzerland. Hence, **statement 4 is not correct**.

80. Ans: A

Exp:

International Solar Alliance (ISA):

Recently, the **Sixth Assembly of the International Solar Alliance (ISA)** was convened at **Bharat Mandapam in New Delhi**.

- The assembly announced an increase in **Viability Gap Funding (VGF) for projects**, raising it from **10% to a range of 10% to 35% to foster greater investments**, particularly in African countries. Hence, **statement 2 is correct**.

- Four projects supported by the ISA were inaugurated during the assembly. These initiatives spanned across different countries:

- ◆ Solarization of the Malawi Parliament.
- ◆ Solarization of rural healthcare centres in Fiji.

International Solar Alliance (ISA):

- Initially conceived as a joint effort by India and France, ISA was conceptualized during the 21st Conference of Parties (COP21) in 2015.
 - ◆ Currently, 116 countries are signatories, with 94 having completed the necessary ratification to become full members. Hence, statement 1 is not correct.
- The ISA is guided by its 'Towards 1000' strategy which aims to mobilize USD 1,000 billion of investments in solar energy solutions by 2030, while delivering energy access to 1,000 million people using clean energy solutions and resulting in installation of 1,000 GW of solar energy capacity. Hence, statement 3 is not correct.
 - ◆ This would help mitigate global solar emissions to the tune of 1,000 million tonnes of CO₂ every year.

81. Ans: C

Exp:

Alternatives to Stubble Burning:

- PUSA Decomposers: The decomposers are in the form of capsules made by extracting fungi strains that help the paddy straw to decompose at a much faster rate.
- Happy Seeder: It is a tractor-mounted device offering an eco-friendly alternative to stubble burning.
 - ◆ It works by cutting and lifting rice straw, simultaneously sowing wheat into the exposed soil and depositing the straw over the sown area as protective mulch.
- Palletisation: Paddy straw, when dried and transformed into pellets, becomes a viable alternative fuel source.
 - ◆ When mixed with coal, these pellets can be utilized in thermal power plants and industries, potentially saving coal usage and lowering carbon emissions.
- Hence, option C is correct.

82. Ans: B

Exp:

Graded Response Action Plan (GRAP):

- About:
 - ◆ The GRAP consists of emergency measures designed to prevent the deterioration of air quality after reaching specific thresholds in the Delhi-NCR region. Hence, statement 1 is correct.
 - ◆ The Ministry of Environment, Forests & Climate Change (MoEF&CC) notified the GRAP in 2017. Hence, statement 2 is not correct.
 - ◆ Commission for Air Quality Management in NCR & Adjoining Areas (CAQM) implements the GRAP. Hence, statement 3 is not correct.
- Implementation: It is implemented under four stages:

The stages and restrictions

Good 0-50	Satisfactory 51-100	Moderate 101-200
Poor 201-300	Very Poor 300-400	Severe 401-500

STAGE I (AQI 201-300)

Agencies to strictly enforce orders by NGT, SC on keeping vehicles older than 10 years (for diesel) and 15 years (petrol) off roads.

STAGE II (AQI 301-400)

- Measures to curb air pollution at hot spots
- Diesel generators of more than 19KW cannot be used unless they run on dual fuel or have emission control devices.

STAGE III (AQI 401-450)

- BS-III petrol, BS-IV diesel private cars to be banned in NCR. Last year, the rule was optional for state governments
- Schools will likely be closed for children up to Class 5.

STAGE IV (AQI OVER 450)

- Light commercial vehicles registered outside Delhi will be restricted except those that are EVs/CNG/ BS-VI diesels. Vehicles carrying essentials or providing essential services to be allowed
- Educational institutions will likely be closed. Non-emergency commercial activities and odd-even vehicle policy may be rolled out.

- GRAP is incremental in nature and thus, when the air quality dips from 'poor' to 'very poor,' measures listed under both sections have to be followed.

83. Ans: C

Exp:

- CBAM is part of the "Fit for 55 in 2030 package", which is the EU's plan to reduce greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels in line with the European Climate Law. Hence, statement 1 is correct.
- The CBAM is a policy tool aimed at reducing Carbon Emissions by ensuring that imported goods are subject to the same carbon costs as products produced within the EU. Hence, statement 2 is correct.

84. Ans: D

Exp:

Cheetah Reintroduction Project:

- The Cheetah Reintroduction Project in India formally commenced on September 17, 2022, to restore the **population of cheetahs**, which were declared **extinct in the country in 1952**. Hence, **statement 1 is correct**.
- The project involves the translocation of cheetahs from South Africa and Namibia to **Kuno National Park in Madhya Pradesh**. Hence, **statement 2 is correct**.
- The project is implemented by the **National Tiger Conservation Authority (NTCA)** in collaboration with the **Madhya Pradesh Forest Department, Wildlife Institute of India (WII)**, and cheetah experts from Namibia and South Africa. Hence, **statement 3 is correct**.

85. Ans: B

Exp:

Global Tiger Recovery Program (GTRP):

- **Global Tiger Recovery Program (GTRP)** was launched in 2010 under the **Global Tiger Initiative (GTI)** by the **World Bank** to save wild Tigers. Hence, **statement 1 is correct**.
- Under **GTRP Tiger Range Countries (TRCs)** committed to doubling wild Tiger populations by 2022. Hence, **statement 2 is not correct**.
- Global Tiger Recovery Program (GTRP) evolved under the Global Tiger Initiative in 2010. The **St Petersburg Declaration in 2010** saw **13 Tiger range countries** commit to **reversing the decline of the species population** and **double their numbers by 2022**.
- **Retrospective analysis shows mixed results: success in South Asia and Russia, alarming decline in South East Asia**. Challenges include **lack of Tiger governance, habitat loss, human-wildlife conflict, and prey depletion**.
- GTRP 2.0 aligns with the **Post-2020 Global Biodiversity Framework (GBF)**, providing an opportunity for TRCs to **integrate Tiger conservation with global goals**. Anticipated outcomes include **cross-sectoral conservation, increased investment, habitat protection, conflict management, and reduced wildlife trade**. Hence, **statement 3 is correct**.
- The **GBF, endorsed by 188 countries** including all TRCs, coincides with the early phase of the new Global Tiger Recovery Program (2023-2034). This presents a special chance for TRCs and institutions to **harmonize Tiger conservation with the global framework's goals**.

86. Ans: A

Exp:

Plastic Waste Management (Amendment) Rules, 2022:

- The **Ministry of Environment, Forest, and Climate Change** announced the **Plastic Waste Management (Amendment) Rules, 2022**, which notified the instructions on **Extended Producer Responsibility (EPR)** for plastic packaging.
- **Reuse of rigid plastic packaging** material has been **mandated in the guidelines** to reduce the use of fresh plastic material for packaging. Hence, **statement 1 is correct**.
- The **enforceable prescription of minimum level of recycling** of plastic packaging waste collected under EPR along with use of recycled plastic content will further reduce plastic consumption and support recycling of plastic packaging waste.
- In a **significant first, the guidelines allow for sale and purchase of surplus extended producer responsibility certificates**. Hence, **statement 2 is not correct**.
- This will **set-up a market mechanism** for plastic waste management.

87. Ans: C

Exp:

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES):

- CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) is an **international agreement** between governments. Its aim is to **ensure that international trade in specimens of wild animals and plants does not threaten the survival of the species**. Hence, **statement 1 is correct**.
- CITES was drafted as a result of a **resolution adopted in 1963** at a meeting of **members of IUCN (The World Conservation Union)**. The text of the Convention was **finally agreed at a meeting of representatives** of 80 countries in Washington, D.C., United States of America, on 3 March 1973, and on 1 July 1975 CITES entered in force. Hence, **statement 2 is correct**.
- CITES is an international agreement to which States and regional economic integration organizations **adhere voluntarily**. States that have agreed to be bound by the Convention ('joined' CITES) are known as Parties. Although **CITES is legally binding** on the Parties – in other words they have to implement the Convention – it **does not take the place of national laws**. Rather it **provides a framework** to be respected by each Party, which has to adopt its own domestic legislation to ensure that CITES is implemented at the national level.



- For many years CITES has been among the conservation agreements with the largest membership, with now 184 Parties. **Hence, statement 3 is correct.**

88. Ans: A

Exp :

- The **UNCCD is the only legally binding framework** set up to address **desertification and the effects of drought**.
 - ◆ There are currently **197 Parties** to the Convention, including **196 country Parties and the European Union**. **Hence, statement 1 is correct.**
- According to the **UNCCD**, sand and dust storms are caused by **both natural and human factors**.
 - ◆ About **75% of global dust emissions originate from natural sources** in the world's drylands, such as **hyper-arid regions**, topographic depressions, and dry ancient lake beds.
 - ◆ The remaining **25% are attributed to human activities**, mainly agriculture.
 - ◆ Hence, statement 2 is not correct.

89. Ans: D

Explanation:

The given description is about the Ghol Fish **hence, Option D is the correct answer.**

Ghol Fish:

- **Geographical Distribution:**
 - ◆ The ghol fish is primarily found in the **Indo-Pacific region**.
 - Its habitat spans from the **Persian Gulf** to the expansive waters of the **Pacific Ocean**.
- **Economic Significance:**
 - ◆ The ghol fish has a substantial market demand in **China and other Asian countries**.
 - Ghol fish is also known as **'Sea Gold'** for its high market value.
 - ◆ Its meat is exported to **European and Middle-Eastern countries**, while the **dried air bladder** is in high demand, especially in China.
- **Benefits:**
 - ◆ Good for eye health and helps in maintaining eyesight.
 - ◆ Prevent ageing and wrinkles, the collagen content in the ghol fish prevents wrinkles and also keeps the **elasticity of the skin intact**.
 - ◆ Omega-3 content in ghol fish improves the Intelligence Quotient (IQ) of infants if fed on a regular basis – it stimulates the **growth of brain cells**.

90. Ans: D

Exp:

Compressed Bio-Gas (CBG)

- CBG is a **renewable, environmentally friendly gaseous fuel** derived from the **anaerobic decomposition** of organic materials. It is produced through a process called **biomethanation or anaerobic digestion**, where various organic sources such as agricultural waste, animal manure, food waste, sewage sludge, and other biomass materials are **broken down by bacteria in the absence of oxygen**. **Hence, statement 1 is not correct.**
- The resulting biogas primarily consists of **methane (usually over 90%)**, carbon dioxide, traces of hydrogen sulfide, and moisture. **Hence, statement 2 is not correct.**
- To convert biogas into CBG, purification steps are employed to remove **impurities such as carbon dioxide, hydrogen sulfide, and moisture**.
- The purified methane gas is then compressed to a high pressure, typically around 250 bar or higher, hence the term "Compressed Biogas."

91. Ans: B

Exp:

Recently, scientists have unveiled pivotal insights into **how plants perceive and respond to danger signals from neighboring plants**.

- **Green Leaf Volatiles as Signaling Agents: One of the ways that plants communicate is by releasing and sensing airborne chemicals called Green leaf volatiles (GLVs).**
 - ◆ GLVs, emitted by plants when injured, **create the pleasant smell of fresh-cut grass for humans**. **Hence, statement 1 is not correct.**
 - ◆ However, to neighboring plants, **this scent functions as a warning signal, indicating potential danger**. **Hence, statement 2 is correct.**

92. Ans: (C)

Exp:

Rat-Hole Mining

- Rat hole mining is a **method of extracting coal from narrow, horizontal seams**, prevalent in Meghalaya. **Hence, statement 1 is correct.**
- The term "rat hole" refers to the **narrow pits dug into the ground**, typically just large enough for one person to descend and extract coal.
- Once the pits are dug, miners descend using ropes or bamboo ladders to reach the coal seams. The coal is then manually extracted using primitive tools such as pickaxes, shovels, and baskets.



- The **National Green Tribunal (NGT)** banned rat-hole mining in 2014 for being unscientific, but the practice continues to be rampant. **Hence, statement 2 is correct.**
- Several accidents have resulted in deaths of rat-hole miners in the Northeastern state.
- In 2018, 15 men involved in illegal mining were trapped inside a flooded mine. Only two bodies **could be recovered in the course of the rescue operation** that lasted for more than two months.

93. Ans: B

Exp:

Global Tiger Forum:

- ◆ The GTF is the only intergovernmental international body established with members from willing countries to embark on a global campaign to protect the Tiger. **Hence, statement 1 is correct.**
- ◆ Its secretariat is **located in New Delhi, India.** **Hence, statement 2 is correct.**
- ◆ It was formed on recommendations from an international symposium on Tiger Conservation in New Delhi, India.
- ◆ **Out of the 13 tiger range countries, seven are currently members of GTF:** Bangladesh, Bhutan, Cambodia, India, Myanmar, Nepal, and Vietnam besides **non-tiger range country U.K.** **Hence, statement 3 is not correct.**

94. Ans: D

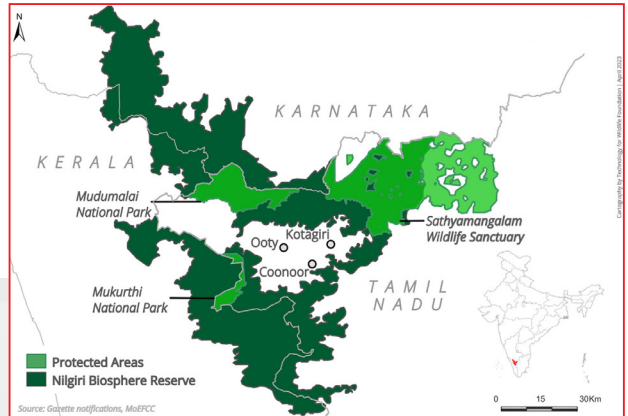
Exp:

Nilgiri Biosphere Reserve

- **About:**
 - ◆ The very name **‘Nilgiris’ with literary meaning ‘blue mountains’** has originated from the appearance of **blue flower clad mountains (Neelakurinji flowers)** of the Nilgiris plateau within the State of Tamil Nadu.
 - The reserve spans across three Indian states: **Tamil Nadu, Karnataka, and Kerala.**
 - ◆ It was the **first biosphere reserve in India established in 1986.** It is India’s **first biosphere reserve under UNESCO’s Man and the Biosphere Programme.** Home to several tribal groups such as the **Adiyan, Aranadan, Kader, Kurichian, Kuruman, and Kurumbas.**
 - ◆ It portray the confluence of **Afro-tropical and Indo-Malayan biotic zones** of the world.



● **Protected Areas in NBR:**

- ◆ The **Mudumalai Wildlife Sanctuary, Wayanad Wildlife Sanctuary, Bandipur National Park, Nagarhole National Park, Mukurthi National Park and Silent Valley** are the protected areas present within this reserve. **Hence, option D is correct.**



95. Ans: A

Exp:

Charac-teristics	Tortoises	Turtles
		
Shell Shape	High-domed, rounded, heavy shell.	Thinner and more streamlined
Habitat	Primarily terrestri- al (land-dwelling)	Adapted for life in water
Diet	Primarily herbiv- orous	Omnivorous or her- bivorous
Limbs	Thick, columnar legs, claw-like toes	Flipper-like legs, webbed feet2

- Among the given, only 1 and 4 are the correct characteristics of tortoises; 2 and 3 are the characteristics of turtles. **Hence, option A is correct.**

96. Ans: B

Exp:

- Methane is a powerful greenhouse gas (GHG), which has an atmospheric lifetime of around a decade and affects the climate for hundreds of years.



- Methane has more than **80 times the warming power of carbon dioxide over the first 20 years** of its lifetime in the atmosphere. Hence, **statement 1 is correct.**
- **Methane promotes Generation of Tropospheric Ozone:** Increasing emissions are driving a rise in tropospheric ozone air pollution, which causes more than one million premature deaths annually. Hence, **statement 2 is not correct.**
- **'Harit Dhara' (HD):**
 - ◆ Indian Council of Agricultural Research (ICAR) has developed an **anti-methanogenic feed supplement 'Harit Dhara' (HD)**, which can **cut down cattle methane emissions by 17-20%** and can also result in higher milk production. Hence, **statement 3 is correct.**
- Hence, **Option B is correct.**

97. Ans: D

Exp:

- **Platypus:**
 - ◆ Platypuses are **unique to Australia**. Its streamline body and a broad, flat tail are covered with dense waterproof fur, which provides excellent thermal insulation.
 - They possess **webbed feet for swimming** and electroreceptors in their bills to find food in rivers and streams.
 - ◆ Along with echidnas, Platypuses are grouped in a separate order of mammals known as monotremes, which are distinguished from all other mammals because they lay eggs.
 - Also, males have a venomous spur on their ankles, a unique feature among mammals, that they primarily used during the breeding season.
 - While not lethal, the venom can cause severe pain and swelling in humans.
- **Habitat and Distribution:**
 - ◆ Platypuses inhabit freshwater systems across a wide range of Australian landscapes. Hence, option D is correct answer.
 - ◆ They can be found in tropical rainforest lowlands, plateaus of northern Queensland, and even cold, high-altitude regions like Tasmania and the Australian Alps.
- **Seasonality and Behavior:**
 - ◆ Platypuses are active year-round, with a preference for twilight and nighttime activity.
 - ◆ Platypuses spend much of their time in burrows along riverbanks or in rocky crevices and stream debris.

- **Feeding Habits:**

- ◆ Platypuses **primarily feed at night on a wide variety of aquatic invertebrates.**
- ◆ They feed on insect larvae, shrimps, swimming beetles, water bugs, tadpoles, worms, and more.
- ◆ Larger prey is taken individually and consumed after floating on the water surface.
- **Predators and Threats:**
 - ◆ Predators include crocodiles, goannas, carpet pythons, eagles, and large native fish.
 - ◆ Land-based predators like foxes, dogs, and dingoes may pose a threat.
 - ◆ Ectoparasites, tick species, and fungal infections can also affect platypuses.
- **Conservation Status:**
 - ◆ IUCN Red List: Near Threatened.

98. Ans: B

Exp:

- Dandeli forest is located in the Uttara Kannada district of Karnataka and is **part of the Western Ghats**, a globally recognized biodiversity hotspot. Hence, **statement 1 is not correct.**
- The Kali Tiger Reserve is a protected area adjacent to the Dandeli Forest..
 - ◆ The Tiger Reserve comprises two important protected areas of the region viz., Dandeli Wildlife Sanctuary and Anshi National Park.

Hence, statement 2 is correct.
- The invasive eupatorium weed is replacing native grasses in the forest undergrowth, **impacting herbivores** as it is not a preferred food source and is susceptible to fires. Hence, **statement 3 is correct.**

99. Ans: C

Exp:

- **About:**
 - ◆ The Ganga River Dolphin (*Platanista gangetica*), also known as the "Tiger of the Ganges" was officially discovered in 1801.
- **Habitat:**
 - ◆ Ganges river dolphins historically distributed in major river systems (Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu) of India, Nepal and Bangladesh.
- **Features:**
 - ◆ The Ganges river dolphin can **only live in freshwater and is essentially blind.** Hence, **statement 1 is correct.**

- ◆ They hunt by emitting **ultrasonic sounds**, which bounces off of fish and other prey, enabling them to “see” an image in their mind. Hence, **statement 2 is correct.**
- ◆ They are frequently found alone or in small groups, and generally a mother and calf travel together.
 - Females are larger than males and give birth once every two to three years to only one calf.
- ◆ Being a mammal, the Ganges river dolphin cannot breathe in water and must surface every 30-120 seconds.
 - Because of the sound it produces when breathing, the animal is popularly referred to as ‘Susu’.
- **Importance:**
 - ◆ They have significant importance because it is a reliable indicator of the health of the entire river ecosystem.
 - The government of India declared it the **National Aquatic Animal in 2009**. It is also the **State Aquatic Animal of Assam**. Hence, **statement 3 is correct.**

100. Ans: A

Exp:

- **Amphibians** fall under the **Chordata phylum** of the kingdom **Animalia**, Eg., **Frogs, Toads, Salamanders, newts, caecilians** etc.
- **Amphibians** are **multicellular vertebrates** that live both on **land** and **water**. Hence, **statement 1 is correct.**
- They **respire** through the **lungs** and **skin**.
- They are the **first cold-blooded animals** to have appeared on **land**. Hence, **statement 2 is correct.**
- They are the **first cold-blooded animals** to have appeared on **land**.
- Being **Cold-blooded animals**, **amphibians can not** regulate their **internal body temperature** with the change in the environment. Hence, **statement 3 is not correct.**

101. Ans: A

Exp:

- Dhole (*Cuon alpinus*) is a wild carnivorous animal and is a member of the family **Canidae** and the class **Mammalia**. Hence, **statement 1 is not correct.**
- **Conservation Status:**
 - Wildlife Protection Act, 1972: Schedule 2.
 - International Union for Conservation of Nature’s Red List: **Endangered**.

- The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES): Appendix II. Hence, **statement 2 is not correct.**

- In 2014, the Indian government sanctioned its first **Dhole conservation breeding center** at the Indira Gandhi Zoological Park (IGZP) in Visakhapatnam. Hence, **statement 3 is correct.**

102. Ans: A

Exp:

About International Coral Reef Initiative (ICRI) :

- It is a global partnership between Nations and organizations that strives to preserve coral reefs and related ecosystems around the world. Hence, **statement 1 is correct.**
- **The Initiative was founded in 1994 by eight governments: Australia, France, Japan, Jamaica, the Philippines, Sweden, the United Kingdom, and the United States of America.**
- It was announced at the First Conference of the Parties of the Convention on Biological Diversity, 1994.
- ICRI has 101 members, including 45 countries (India is one of them). However, India is not a founding member of this initiative. Hence, **statement 2 is not correct.**

103. Ans: B

Exp:

- **Stratospheric Aerosol Intervention (SAI)** is a proposed method of **solar geoengineering** (or solar radiation modification) to reduce **global warming**. Hence, **statement 2 is correct.**
- This would **introduce aerosols** into the **stratosphere** to create a **cooling effect** via **global dimming** and **increased albedo**, which occurs naturally from **volcanic winter**. Hence, **statement 1 is not correct.**
- **Mount Pinatubo** in the **Philippines** erupted in **2001** and injected about **15 million tonnes** of **sulfur dioxide** into the **stratosphere**, which then formed **aerosol particles**.
- According to the **National Aeronautics and Space Administration (NASA)**, it caused a drop in the **average global temperature** of about **0.6 degrees Celsius** over the **next 15 months**.
- **Moderate SAI levels** could enhance **food productivity** in **mid-latitude temperate regions** like **North America** and **Eurasia**. Hence, **statement 3 is correct.**



104. Ans: A

Exp:

- **Dancing frogs**, specifically, are a **group of frogs** belonging to the **Micrixalus genus**. Hence, **statement 1 is correct**.
- **Dancing frogs** exhibit a unique **mating behavior** characterized by **foot flagging**, where males extend their hind legs and wave their webbed toes.
- The **population of dancing frogs** is **threatened** by various **anthropogenic factors**, including **invasive species of Mosquito Fish, land use change, temperature and humidity**. Hence, **statement 2 is not correct**.
- Conservation initiatives, such as the **Wildlife Trust of India's Amphibian Recovery Project**, are actively working to address challenges that pose a risk of extinction to amphibian species.
- They **prefer habitats** with a **thick canopy cover**, and are often found **near slow-moving perennial streams** within the **Western Ghats**. Hence, **statement 3 is correct**.

105. Ans: C

Exp:

- **UN-Habitat** is the **United Nations programme** working towards a better urban future.
- It is a programme to **promote socially and environmentally sustainable** human settlements development and the achievement of adequate shelter for all. Hence, **statement 1 is correct**.
- The theme of the **World Habitat Day, 2023** is "**Resilient Urban Economies**. Cities as drivers of growth and recovery". Hence, **statement 2 is correct**.
- It aims to **acknowledge initiatives** which have made **outstanding contributions** in the field of human settlements, provision of housing, highlighting the **plight of people living in poverty or who have been displaced, developing and improving human settlements and the quality of urban life** to leave no one behind echoing the Sustainable Development Goals 2030 with emphasis on Goal 11: Sustainable Cities and Communities.
- The **UN-Habitat Scroll of Honour** award is handed over at the **Global Observance** of the **World Habitat Day**, the day the **United Nations** has set aside to remind the world that we all have the **power and the responsibility** to reflect on the **state of our cities and towns** and to **shape the future**. Hence, **statement 3 is correct**.

106. Ans: D

Exp:

- An ozone hole is a **region of the stratosphere** over Antarctica where the ozone layer is exceptionally depleted. Hence, **statement 1 is not correct**.
 - The ozone hole is not technically a "hole" where no ozone is present. Scientists use the word hole as a metaphor for the area in which ozone concentrations drop below the historical threshold of 220 Dobson Units.
- In response to the ozone depletion crisis, the international community recognized the need for action, leading to the **Vienna Convention in 1985** and the subsequent **Montreal Protocol in 1987**. Hence, **statement 2 is not correct**.

107. Ans:(d)

Exp:

- Methane is a highly potent greenhouse gas responsible for about 30% of global warming since the **Industrial Revolution**. Hence, **statement 1 is correct**.
- Methane has more than 80 times the warming power of carbon dioxide over the first 20 years of its lifetime in the atmosphere. Hence, **statement 2 is correct**.
- Methane is the primary reason for ground-level ozone pollution and mitigation efforts will help prevent "nearly one million premature deaths through 2050, which is equivalent to the current population of Amsterdam, Netherlands". Hence, **statement 3 is correct**.

108. Ans: C

Exp:

Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA):

- Article 25 of the **Convention on Biological Diversity** establishes an open-ended **intergovernmental scientific advisory body** known as the **Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA)**. Hence, **statement 1 is correct**.
- Its purpose is to provide the Conference of the Parties (COP) and, as appropriate, its other subsidiary bodies, with **timely advice relating to the implementation of the Convention**. Hence, **statement 2 is correct**.

109. Ans: A

Exp:

- **Dust suppressants** are typically composed of **calcium or magnesium salts**, which are mixed with water and then sprayed on roads. This mixture effectively **suppresses dust, providing longer-lasting relief from particulate matter** in the air. Hence, **statement 1 is not correct**.



- **Wind Augmentation and Air Purifying Unit (WAYU):** It can be positioned in an industrial complex, residential complexes, and schools in the vicinity of traffic road intersection/divider to tackle air pollution.
 - ◆ This device works on two principles i.e. Wind generation for dilution of air pollutants and active pollutants removal. Hence, statement 2 is not correct.
- **Medium/Large-Scale Smog Towers:** These towers are substantial air purifiers targeting the reduction of particulate matter and pollutants on a larger scale such as an urban locality..Hence, statement 3 is correct.

110. Ans: A

Exp:

- ◆ Biomass co-firing is the practice of substituting a part of the fuel with biomass at coal thermal plants.
- ◆ Biomass co-firing stands for adding biomass as a partial substitute fuel in high efficiency coal boilers.
 - Coal and biomass are combusted together in boilers that have been designed to burn coal. For this purpose, the existing coal power plant has to be partly reconstructed and retrofitted.
 - Co-firing is an option to convert biomass to electricity, in an efficient and clean way, and to reduce GHG (Greenhouse Gases) emissions of the power plant. Hence, statement 1 is correct.
- ◆ The MNRE and Central Pollution Control Board (CPCB) have introduced Finance Assistance Schemes to support biomass pellet manufacturing units.
- ◆ The Reserve Bank of India (RBI) has approved 'Biomass pellet manufacturing' as an eligible activity under Priority Sector Lending (PSL), fostering financial viability for such endeavors. Hence, statement 2 is not correct.

111. Ans: C

Exp:

Land Degradation Neutrality (LDN):

- LDN is a simple idea and a powerful tool, means to secure enough healthy and productive natural resources by avoiding Degradation whenever possible and restoring land that has already been degraded. Hence, statement 1 is correct.

- At its core are better land management practices and better land-use planning that will improve economic, social and ecological sustainability for present and future generations.
- LDN provides significant benefits in terms of mitigation and adaptation to climate change. Halting and reversing land degradation can transform the land from being a source of Greenhouse Gas Emissions (GHG) to a carbon sink, by increasing carbon stocks in soils and vegetation.

Efforts to Curb Land Degradation:

- **The Bonn Challenge:** To bring 150 million hectares of the world's deforested and degraded land into restoration by 2020, and 350 million hectares by 2030. Hence, statement 2 is correct.
- **Great Green Wall: Initiative by Global Environment Facility (GEF),** where eleven countries in Sahel-Saharan Africa have focused efforts to fight against land degradation and revive native plant life to the landscape.

112. Ans: B

Explanation:

Present Issue in Green Hydrogen Production:

- **Definition of Green Hydrogen:**
 - ◆ The MNRE has defined green hydrogen as hydrogen production that emits no more than 2 kg of carbon dioxide per kg of hydrogen. Hence, statement I is correct.
 - However, this definition is currently subject to interpretation, raising concerns about its practical implementation.
- **Continuous Operation of Electrolysers:**
 - ◆ If electrolysers (essential for green hydrogen production) run 24/7, they would need to operate at night when there is no solar power available. This would likely require drawing electricity from the conventional coal-fired grid, using which could increase carbon emissions.

Implications of Green Hydrogen Production:

- **Biomass Use and Green Hydrogen Production:**
 - ◆ India's standards for green hydrogen production permit the use of biomass, which, when burned, also generates carbon emissions. This introduces a challenge in achieving truly clean green hydrogen. Hence, statement II is correct.

Both the statements are correct but Statement-II is not the correct explanation for Statement-I



113. Ans: B

Exp:

- The **Ministry of Environment, Forest & Climate Change (MoEFCC)** set the hazard line for India's coast to manage shoreline changes due to climate change. **Hence, statement 1 is correct.**
- The **Coastal Regulation Zone Notification, 2019** aims to conserve coastal areas and livelihoods, allowing erosion control measures while defining No Development Zones. **Hence, statement 2 is not correct.**
- The **Coastal Management Information System (CMIS)** collects near-shore coastal data for designing and maintaining protection structures at vulnerable stretches.
 - ◆ Successful coastal erosion mitigation measures were demonstrated in **Pondicherry and Kerala**, aiding restoration and protection of coastal areas. **Hence, statement 3 is correct.**

114. Ans: A

Exp:

- Green Credit refers to a unit of incentive provided to individuals and entities engaged in activities that deliver a positive impact on the environment. **Hence, statement 1 is correct.**
 - ◆ It is a voluntary program initiated by the government to **incentivize various stakeholders in contributing to environmental preservation and sustainable practices.**
- This program is part of the broader '**LIFE**' campaign (**Lifestyle for Environment**), and it encourages and rewards voluntary environmentally-positive actions. **Hence, statement 2 is correct.**
- It is important to note that the Green Credit program operates independently of the carbon credits provided under the Carbon Credit Trading Scheme, 2023, which is governed by the Energy Conservation Act of 2001. Hence, statement 3 is not correct.

115. Ans: B

Exp:

- Metal mining pollution refers to the **contamination and environmental degradation** caused by the **extraction and processing of Metallic Ores to obtain valuable metals.**
- It involves various activities associated with **mining, including exploration, extraction, transportation, processing, and waste disposal.** **Hence, Statement 1 is correct.**

- The Metal Mining Pollution involves **hazardous substances** including **lead, zinc, copper, and arsenic.**

◆ These elements, **detrimental to both ecosystems and human health**, tend to accumulate downstream from mining sites over prolonged durations. **Hence, Statement 2 is correct.**

- **Sources of Metal Mining Pollution:**

◆ **Tailings:** Tailings are finely ground rock particles left over after the valuable **metals have been extracted** from the ore. These tailings often contain **hazardous elements** like mercury, arsenic, lead, cadmium, and other toxic substances that can contaminate nearby water sources and soil.

◆ **Acid Mine Drainage (AMD):** AMD occurs when **sulfide minerals in the mined rocks are exposed to air and water**, leading to the production of sulfuric acid.

- This acid can contaminate rivers, streams, and groundwater, posing a significant threat to aquatic life and ecosystems. **Hence, Statement 3 is not correct.**

◆ **Airborne Pollution:** Dust and particulate matter generated during mining operations can become airborne, spreading pollutants **such as heavy metals and other harmful compounds.** Inhalation of these pollutants can pose health risks to both miners and nearby communities.

◆ **Chemical Usage:** Chemicals such as cyanide and sulfuric acid are often used in metal extraction processes. **Accidental spills or inadequate containment** of these chemicals can result in contamination of soil and water, causing serious environmental damage.

116. Ans: C

Exp:

Electrified Flex Fuel Vehicle:

Recently, the Prototype of the **world's 1st Bharat Stage-6 (BS6) Stage-II, Electrified Flex fuel vehicle**, developed by Toyota Kirloskar Motor was unveiled.

- This vehicle is capable of **running on up to 85% ethanol blended petrol** and features an **electric powertrain.**
- The Ministry of Petroleum & Natural Gas has also highlighted flex-fuel vehicles' potential to substitute petrol with higher **ethanol blends beyond 20%.**

Electrified Flex Fuel Vehicles:

- Electrified Flex Fuel Vehicle integrates both a **Flex Fuel engine** and an **electric powertrain**, offering the dual benefit of **higher ethanol use and improved fuel efficiency.**

- **Flex Fuel Strong Hybrid Electric Vehicles (FFV-SHEV):** When FFV is integrated along with strong hybrid electric technology, it is referred as FFV-SHEVs.

- ◆ Strong hybrid is another term for full hybrid vehicles, which have the capability to **run solely on either electric or petrol modes.**
- ◆ In contrast, **mild hybrids cannot run purely on one of these modes and use the secondary mode merely as a supplement** to the main mode of propulsion.

Ethanol Blending:

- **About:**
 - ◆ **Ethanol**, is a key **biofuel** produced through fermentation of sugars by yeasts or petrochemical methods.
 - ◆ The **Ethanol Blending Programme (EBP)** in India aims to decrease oil imports, curb emissions, achieve energy self-sufficiency, and **doubling farmers' income**, transitioning them to 'urjadata' while remaining 'annadata', and contributing to environmental improvement.
 - ◆ The Government of India has advanced the **target for 20% ethanol blending in petrol (also called E20) to 2025 from 2030.** Hence, **statement 2 is correct.**
 - India has been increasing its ethanol blending in petrol from 1.53% in 2013-14 to **11.8% in August 2023.**

117. Ans: B

Exp:

The **Red Sand Boa (*Eryx johnii*)**, commonly called the **Indian Sand Boa**, is a **non-venomous species.**

- ◆ It is a primarily **reddish-brown and thick-set snake that grows to an average length of 75 cm.**
- ◆ Unlike most snakes, the tail is almost as thick as the body and gives the reptile the appearance of being **"double-headed"**.
- ◆ The Red Sand Boa is the largest of the sand boa in the world. Nocturnal and spends the majority of its time under the ground.
- **Status:**
 - ◆ **IUCN Red List:** Near Threatened
 - ◆ **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES):** Appendix II.
 - ◆ **Indian Wildlife (Protection) Act of 1972:** Schedule IV. Hence, **statement 1 is correct.**

- **Distribution:**

- ◆ Found in the whole of India **excluding North-east states and North-Bengal**; also not found in **Indian islands.** Hence, **statement 2 is not correct.**

118. Ans: a

Explanation:

- Hoolock Gibbons, known as the smallest and fastest of all apes, inhabits tropical and subtropical forests in Southeast Asia. They have high intelligence, distinct personalities, and strong family bonds like other apes.
- They represent one of the 20 gibbon species found worldwide. Hoolock Gibbons are India's only ape species.
 - ◆ Hence, **statement 1 is correct.**
- It inhabits in all the states of the north-east, restricted between the south of the Brahmaputra River and east of the Dibang River. Outside India, it is found in eastern Bangladesh and north-west Myanmar.
 - ◆ Hence, **statement 2 is not correct.**
- **IUCN Red List: Vulnerable**
- In India, both species are listed on Schedule 1 of the Indian (Wildlife) Protection Act 1972.
 - ◆ Hence, **statement 3 is not correct.**

119. Ans: B

Exp:

- **Changthangi goat** is an **animal** found in the **cold, arid Changthang region of Ladakh.** Hence, **statement 1 is correct.**
- The **Changthangi goat** is usually domesticated and raised by **nomadic communities** called the **Changpa.** Hence, **statement 2 is correct.**
- The wool that is used in weaving the **Pashmina Shawl** is obtained from the **Changthangi goats.**
- The **Mohair Wool** used in **weaving the shawl** is obtained from the **Angora goat.** Hence, **statement 3 is not correct.**

120. Ans: C

Exp:

Leopards (*Panthera pardus*)

- The leopard is the smallest of the Big Cats (Of genus *Panthera* namely the **Tiger, Lion, Jaguar, Leopard, and Snow Leopard**), and known for its ability to adapt in a variety of habitats. Hence, **statement 1 is correct.**
- A nocturnal animal, the leopard hunts by night.
 - ◆ It feeds on smaller species of herbivores found in its range, such as the chital, hog deer, and wild boar. Hence, **statement 2 is correct.**

- Melanism is a common occurrence in leopards, wherein the entire skin of the animal is black in colour, including its spots.
 - ◆ A melanistic leopard is often called **black panther** and mistakenly thought to be a different species. **Hence, statement 3 is correct.**
 - ◆ Conservation Status:
 - IUCN Red List: Vulnerable
 - CITES: Appendix-I
 - Indian Wildlife (Protection) Act, 1972: Schedule-I
- Population in India:
 - ◆ As per a recent report 'Status of leopards in India, 2018' released by the Ministry of Environment, Forest and Climate Change, there has been a "60% increase in the population count of leopards in India from 2014 estimates".
 - The 2014 estimates placed the population of leopards at nearly 8,000 which has increased to 12,852.
 - ◆ The largest number of leopards have been estimated in **Madhya Pradesh (3,421) followed by Karnataka (1,783) and Maharashtra (1,690).**

121. Ans: C

Exp:

- The **National Green Tribunal (NGT)** was established in **2010** under the National Green Tribunal Act. **Hence, statement 1 is correct.**
- The **National Green Tribunal (NGT)** recently ordered the MP state govt to stop the **operation of cruise vessels as well as other motor-propelled boats in the Bhoj wetland** on account of the drastic damage being done to water bodies.
 - ◆ The Bhoj Wetland, also known as **Bhopal Lake** is a **designated Ramsar site** and hence, a **wetland of international importance (Ramsar Convention 1971)**. **Hence, statement 2 is correct.**

122. Ans: B

Exp:

- The Indian Coast Guard Ship Samudra Prahari, a specialized Pollution Control Vessel, is currently on an overseas deployment to ASEAN countries from 11 Sep to 14 Oct 2023.
- This deployment is part of India's ASEAN initiatives for Marine Pollution Response, showcasing the Pollution Response capabilities of the Indian Coast Guard (ICG) and its commitment to addressing marine pollution issues and enhancing capacity in the region.

- The vessel is outfitted with **advanced pollution control gear**, including containment tools like **Hi-Sprint Booms and river booms to contain oil spills**, as well as oil recovery devices like **skimmers and side sweeping arms**, along with storage facilities within the **Indian Exclusive Economic Zone**. The ship is also equipped with a **Chetak Helicopter in Pollution Response configuration**.

Hence. Option B is correct.

123. Ans: A

- **UN Convention on the Law of the Sea, 1982** calls signatory states to develop a legal framework to **prevent, reduce and control pollution of the marine environment by dumping**.
 - ◆ **India** is a signatory to UNCLOS.
- The **International Convention for the Prevention of Pollution from Ships (MARPOL)** calls for **prevention of pollution of the marine environment** by ships from operational or accidental causes.
 - ◆ **India** is a signatory to MARPOL.
- The **London Convention and London Protocol** aims to protect the marine environment from pollution caused by the **dumping of wastes and other matter into the ocean**.
 - ◆ The **London Convention** was adopted in **1972** and entered into force in 1975. The **London Protocol** was adopted in **1996** and entered into force in 2006.
 - ◆ **India is not a participant in either of them.**

Ans : D

Exp:

The planetary boundaries framework was first proposed by Johan Rockström and a group of 28 internationally renowned scientists in 2009 to define the **environmental limits within which humanity can safely operate to maintain Earth's stability and biodiversity**.

The Planetary Boundaries framework highlights nine critical issues where human activities are reducing the safe operating space :

- Loss of biosphere integrity (the destruction of ecosystems and biodiversity)
- Climate change
- Ocean acidification
- Land-system change
- Unsustainable freshwater use
- Perturbation of biogeochemical flows
- Alteration of atmospheric aerosols
- Pollution by novel entities
- Stratospheric ozone depletion

Hence, (d) is the correct answer

124. Ans: B

Exp:

- Elephant corridors can be described as a **strip of land that enables elephant movement between two or more friendly habitats**. According to the **Elephant corridor report released by the central government, West Bengal leads with 26 corridors, constituting 17% of the total**. Hence, **statement 1 is correct**.
- **Elephants in India:**
 - ◆ Elephants are **keystone species** as well as the **Natural Heritage Animal** of India.
 - ◆ India has the **largest number of wild Asian Elephants**. The elephant population in the country is estimated to be over 30,000.
 - Karnataka has the highest elephant population in India.

Hence, **statement 2 is correct**.

- **Conservation Status:**
 - ◆ **Convention of the Migratory Species (CMS):** Appendix I
 - ◆ **Wildlife (Protection) Act, 1972:** Schedule I
 - ◆ **International Union for Conservation of Nature (IUCN) Red List of threatened species:**
 - **Asian Elephant:** Endangered
 - **African Forest Elephant:** Critically Endangered
 - **African Savanna Elephant:** Endangered

Hence, **statement 3 is not correct**.

125. Ans: C

Exp:

- Every year, World Rhino Day is observed on 22th September to spread awareness for all five species of rhino and work being done to save them.
 - ◆ It was first announced by the World Wildlife Fund (WWF) - South Africa in 2010. Hence, **statement 1 is correct**.
- **New Delhi Declaration on Asian Rhinos: India, Bhutan, Nepal, Indonesia and Malaysia have signed a declaration for the conservation and protection of the species**. Hence, **statement 2 is correct**.

126. Ans: C

Exp:

- Recently, the scientists of the **Zoological Survey of India (ZSI)** have discovered a new species of a vibrant orange coloured **deep water marine fish** from **Digha Mohana in West Bengal**.
- Hence, **option C is correct**.

127. Ans: B

Exp :

Mukurthi National Park:

- It is **located in the northwest corner of Tamil Nadu in the Western Ghats**. Hence, **statement 1 is not correct**.
- It is a part of **Nilgiri Biosphere Reserve (UNESCO World Heritage Site)** along with **Mudumalai Wildlife Sanctuary**, Bandipur National Park, Nagarhole National Park, Wayanad Wildlife Sanctuary and Silent Valley. Hence, **statement 2 is correct**.
- The park was created to protect its **keystone species**, the **Nilgiri Tahr**. Hence, **statement 3 is correct**.

128. Ans: B

Exp:

- The United Nations Climate Ambition Summit (CAS) held in United Nations Headquarters, New York on 20th September 2023, **aimed to accelerate climate action as a prelude to the 28th Conference of Parties (COP28)** to the United Nations Framework Convention on Climate Change (UNFCCC). Hence, **statement 1 is correct**.
- China, the US and India, who collectively account for about 42% of global greenhouse gas emissions and are the top three emitters in that order, were all absent from the CAS. Hence, **statement 2 is not correct**.
- In COP 26, India pledged to achieve net-zero emissions by 2070. Hence, **statement 3 is correct**.

129. Ans: A

Exp:

- Pangolins are nocturnal mammals that dig burrows and feed on ants and termites, and play a vital role in ecosystem management, mostly in aerating and adding moisture to the soil.
 - ◆ They are known for their unique appearance, having scales made of keratin that cover their entire body.
 - ◆ When threatened, they can roll into a ball to protect themselves.
- **Pangolin Species: There are eight species of pangolin:**
 - ◆ 4 Species in Africa: Black-bellied pangolin, White-bellied pangolin, Giant Ground pangolin and Temminck's Ground pangolin.
 - ◆ 4 Species in Asia: Indian pangolin, Philippine pangolin, Sunda pangolin and the Chinese pangolin. Hence, **statement 1 is not correct**.



- **Habitat:**

- ◆ It is **adaptable to a wide range of habitats** including primary and secondary **tropical forests, limestone and bamboo forests, grasslands** and agricultural fields. **Hence, statement 2 is not correct.**
- ◆ The Indian Pangolin is found across the Indian subcontinent; **Bihar, West Bengal, and Assam** also have the presence of Chinese pangolin. **Hence, statement 3 is correct.**

130. Ans: a

Exp:

- Lions are listed as Vulnerable on the IUCN Red List, not Endangered. **Hence, statement 1 is not correct.**
- Lions are categorized under CITES as follows: **Indian lion populations are classified under Appendix I, while all other lion populations are encompassed within Appendix II.** **Hence, statement 2 is not correct.**
- In India, lions are indeed protected under Schedule I of the Wildlife (Protection) Act 1972. **Hence, statement 3 is correct.**

131. Ans: C

Exp:

Status of Mangroves in India:

- **About:**
 - ◆ Mangroves are a unique type of coastal ecosystem found in **tropical and subtropical regions**. They are dense forests of salt-tolerant trees and shrubs that thrive in **intertidal zones, where land meets the sea.**
 - The **International Day for the Conservation of the Mangrove Ecosystem** is celebrated every year on **26 July** and aims to raise awareness of the importance of mangrove ecosystems as “a unique, special and vulnerable ecosystem” and to promote solutions for their sustainable management, conservation and uses. **Hence, statement 1 is correct.**
 - ◆ These ecosystems are characterized by their ability to withstand harsh conditions, such as **saline water, tidal fluctuations, and muddy, oxygen-poor soils.**
- **Mangrove Cover in India:**
 - ◆ According to the **Indian State Forest Report 2021**, Mangrove cover in India is 4992 sq. Km which is **0.15% of the country's total geographical area.**

- ◆ **Sundarbans** in West Bengal are the largest mangrove forest regions in the world. It is listed as a **UNESCO World Heritage Site.** **Hence, statement 2 is correct.**
- ◆ Besides the Sundarbans, the Andamans region, the Kachchh and Jamnagar areas in Gujarat too have substantial mangrove cover.

132. Ans: D

Exp:

- **Exclusive Economic Zone (EEZ):**

- ◆ Each coastal State may claim an EEZ beyond and adjacent to its territorial sea that **extends seaward up to 200 nautical miles from its baselines.** **Hence, statement 1 is correct.**
- ◆ Within its EEZ, a coastal state has:
 - Sovereign rights for the purpose of exploring, exploiting, conserving and managing natural resources, whether living or nonliving, of the seabed and subsoil.
 - **Rights to carry out activities like** the production of energy from the water, currents and wind. **Hence, statement 2 is correct.**
- ◆ Unlike the **territorial sea and the contiguous zone, the EEZ only allows for the above-mentioned resource rights.** It does not give a coastal state the right to prohibit or limit freedom of navigation or overflight, subject to very limited exceptions.

133. Ans: C

Exp:

- The Himalayan vulture is aptly named, as it primarily inhabits the towering peaks and valleys of the Himalayan mountain range.
 - ◆ It is a common winter migrant to the Indian plains.
- Its range extends across several countries, including India, Nepal, Bhutan, and China, where it thrives in challenging high-altitude environments. **Hence, Statement-I is Correct .**
- **Conservation Status:**
 - ◆ International Union for Conservation of Nature (IUCN) Red List: **Near Threatened.** **Hence, Statement-II is not Correct .**
- **Therefore, option C is correct.**

134. Ans: D

Exp:

- **Exclusive Economic Zone (EEZ):**
 - ◆ Each coastal State may claim an EEZ beyond and adjacent to its territorial sea that **extends seaward up to 200 nautical miles from its baselines. Hence, statement 1 is correct.**
 - ◆ Within its EEZ, a coastal state has:
 - Sovereign rights for the purpose of exploring, exploiting, conserving and managing natural resources, whether living or nonliving, of the seabed and subsoil.
 - **Rights to carry out activities like the production of energy from the water, currents and wind. Hence, statement 2 is correct.**
 - ◆ Unlike the **territorial sea and the contiguous zone, the EEZ only allows for the above-mentioned resource rights. It does not give a coastal state the right to prohibit or limit freedom of navigation or overflight, subject to very limited exceptions.**

135. Ans: D

Exp:

- India has the **largest number of wild Asian Elephants, estimated at 29,964 according to the 2017 census by Project Elephant.**
- It is about 60% of the species' global population.
- **Karnataka** has the highest number of elephants, followed by **Assam and Kerala.**
- **Conservation Status:**
 - ◆ **International Union for Conservation of Nature (IUCN) Red List of threatened species:**
 - African Forest Elephant (*Loxodonta Cyclotis*)- **Critically Endangered**
 - African Savanna Elephant (*Loxodonta Africana*)- **Endangered**
 - Asian Elephant (*Elephas maximus*)- **Endangered. Hence, statement 2 is not correct.**
 - ◆ **Wildlife (Protection) Act, 1972: Schedule I**
 - ◆ **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES):**
 - African Savanna Elephant: **Appendix II**
 - Asian Elephant: **Appendix I**
- **Elephant Reserves:**

- Establishment of **33 Elephant Reserves covering approximately 80,777 Sq.km. Hence, statement 3 is not correct.**
- **Monitoring of Illegal Killing of Elephants (MIKE) Programme** - The MIKE Programme was established by the CITES by Resolution 10.10 adopted at the tenth Conference of the Parties in 1997. **Hence, statement 1 is not correct.**
 - ◆ The MIKE program **started in South Asia in the year 2003 with the following purpose:**
 - To provide information needed for elephant range States
 - to make appropriate management and enforcement decisions,
 - and to **build institutional capacity within the range States for the long-term management of their elephant populations.**

136. Ans: B

Exp:

- Central Zoo Authority (CZA) is a statutory body (under WPA 1972) to regulate and monitor the functioning of zoos in India and ensure their compliance with the standards and norms prescribed by it.
 - ◆ The Environment Minister is the chairperson of CZA.
- The **Animal Welfare Board of India** is a statutory advisory body on Animal Welfare Laws and promotes animal welfare in the country.
 - ◆ It was established in 1962 under Section 4 of the **Prevention of Cruelty to Animals Act, 1960.**
- Wildlife Crime Control Bureau is a statutory multi-disciplinary body (WPA 1972) established to combat organized wildlife crime in the country.
 - ◆ The Bureau has its headquarters in New Delhi.
- Hence, option B is correct.

137. Ans: A

Exp:

- **Methane** is the simplest hydrocarbon, consisting of one carbon atom and four hydrogen atoms (CH₄). It is flammable and is used as a fuel worldwide.
- It has a **shorter atmospheric lifespan of less than a decade** compared to CO₂'s centuries. **Hence, statement 1 is not correct.**
 - ◆ While present in smaller quantities than CO₂, methane's heat-trapping capacity is approximately 28-36 times stronger over a 100-year period.



- The **Indian Council of Agricultural Research (ICAR)** has developed an **anti-methanogenic feed supplement 'Harit Dhara' (HD)**, which can cut down cattle methane emissions by 17-20% and can also result in higher milk production. **Hence, statement 2 is correct.**
- At the Glasgow climate conference (**UNFCCC COP 26**) in 2021, nearly 100 countries had come together in a voluntary pledge, referred to as the **Global Methane Pledge**, to cut methane emissions by at least 30% by 2030 from the 2020 levels.
 - ◆ India is not a part of the Global Methane Pledge. Hence, statement 3 is not correct.
 - d. Reimagined Focus of the Jal Jeevan Mission

138. Ans: b

Expl:

- The **Ministry of New and Renewable Energy (MNRE)** recently defined a clear **Green Hydrogen Standard**, which establishes **emission thresholds for hydrogen production categorized as 'green'**.
 - ◆ The MNRE has determined that Green Hydrogen should have a **well-to-gate emission of not exceeding 2 kg carbon dioxide (CO₂) equivalent per kg Hydrogen(H₂)**, taken as an **average over the last 12-month period.**
 - ◆ The well-to-gate emission includes water treatment, electrolysis, gas purification, drying and compression of hydrogen.
 - ◆ **Hence, option (b) is correct.**

139. Ans: A

Exp:

- The **Kampala Ministerial Declaration on Migration, Environment and Climate Change (KDMECC)** was originally signed and agreed upon by **15 African states in Kampala, Uganda in July 2022.**
- This declaration is the **first comprehensive, action-oriented framework** led by **African countries** to address **climate-induced mobility.** **Hence, statement 1 is not correct.**
- The initiative was supported by the **International Organization for Migration (IOM)** and the **UN Framework Convention on Climate Change (UNFCCC).** **Hence, statement 2 is correct.**
- **48 African countries** adopted the **Kampala Ministerial Declaration on Migration, Environment, and Climate Change (KDMECC)** to address the **interconnection between human mobility and climate change** on the continent. **Hence, statement 3 is not correct.**

140. Ans: D

Exp:

- The **National Tiger Conservation Authority (NTCA)** is a statutory body under the Ministry of Environment, Forests and Climate Change constituted under enabling provisions of the Wildlife (Protection) Act, 1972, as amended in 2006, for strengthening tiger conservation.
 - ◆ Certain protected areas are declared as Tiger Reserves for conservation of Tigers. These Reserves are **notified by State Governments** as per provisions of Section 38V of the Wildlife (Protection) Act, 1972 **on advice of the NTCA.** **Hence, statement 3 is correct.**
- **Objectives:**
 - ◆ **Providing statutory authority to Project Tiger** so that compliance of its directives becomes legal.
 - ◆ **Fostering accountability of Center-State in management of Tiger Reserves**, by providing a basis for MoU with States within our federal structure.
 - ◆ **Addressing livelihood interests of local people** in areas surrounding Tiger Reserves.
 - ◆ Hence, statements 1, 2 and 4 are correct.

141. Ans: A

Explanation:

Pteropus giganteus

- **About:**
 - ◆ *Pteropus giganteus*, commonly known as the **Indian flying fox**, is a remarkable bat species native to the Indian subcontinent.
- **Appearance:**
 - ◆ *Pteropus giganteus* is characterized by its **large size and fox-like facial features.**
 - ◆ Usually displays a **dark brown, gray, or black body, often with a distinct yellowish mantle (typical of Pteropus genus).**
 - ◆ Males are generally larger than females.
- **Geographic Range:**
 - ◆ *Pteropus giganteus* occurs in tropical regions of **South Central Asia, from Pakistan to China, and as far south as the Maldives.**
- **Habitat:**
 - ◆ These animals can be found in **forests and swamps.** Large groups of individuals roost in trees such as banyan, fig, and tamarind. Roosting trees are usually in the vicinity of a body of water..

- **Conservation Status:**

- ◆ Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES): Appendix II
- ◆ Wildlife (Protection) Act, 1972: Schedule II

- **Negative Impact:**

- ◆ Indian flying foxes considered as vermin cause extensive damage to fruit orchards, and are therefore considered pests in many regions. They may also be responsible for spreading disease, particularly the **Nipah virus, which causes illness and death in humans.**

- **Hence, option A is the correct answer.**

142. Ans: B

Exp:

Major Facts About Lions:

- **Scientific Name: Panthera leo**

- ◆ The lion is divided into two subspecies: the **African lion (*Panthera leo leo*)** and the **Asiatic lion (*Panthera leo persica*)**. Hence, **statement 1 is correct.**

- **Characteristics:**

- ◆ Lions are known for their **distinctive appearance**, including a tawny coat, a tufted tail, and a prominent mane in males.
- ◆ They are social animals and **live in groups called prides**. A pride typically consists of multiple females, their offspring, and a few adult males.

- **Distribution and Habitat:**

- ◆ Lions are found in **sub-Saharan Africa** and a small population exists in the **Gir Forest National Park** in the Indian state of Gujarat. Hence, **statement 2 is correct.**

- **Protection Status:**

- ◆ **IUCN Red List:**

- African Lion: Vulnerable (Globally) Hence, statement 3 is not correct.
- Asiatic Lion: Endangered.

- ◆ **CITES:** Appendix I for populations of India, all other populations are included in Appendix II.

- ◆ **Wildlife (Protection) Act 1972:** Schedule I

143. Ans: B

Explanation:

What are Jellyfish?

- **About:**

- ◆ Jellyfish are **members of the phylum Cnidaria**, a group of animals that includes **corals, sea anemones, hydroids**, and siphonophores. Hence, **statement 1 is correct.**

- Cnidarians are characterized by having **radial symmetry, a central mouth surrounded by tentacles**, and **specialized stinging cells called cnidocytes** that can inject venom into their prey or predators.

- ◆ Jellyfish tend to just **follow the currents of the ocean**, they can be found around the world in every type of ocean water.

- They are considered to be **one of the earliest branches of the animal tree of life.**

- **Characteristics:**

- ◆ Despite their name, jellyfish do not have many characteristics of a fish, they are **invertebrates, or animals with no backbones**. Hence, **statement 2 is correct.**

- Jellyfish are also among the simplest animals in terms of body organization and nervous system, **lacking a brain, a heart, or a skeleton.**

- ◆ However, some jellyfish have evolved remarkable adaptations, such as **eyes, bioluminescence, and complex behaviours**. Hence, **statement 3 is not correct.**

144. Ans: D

Explanation:

- Warm-blooded animals, or **endotherms**, have the **ability to maintain a relatively constant body temperature independent of the environment, which allows them to inhabit a wide range of environments and adapt to various conditions**. Hence, **option D is the correct answer**. All others are the characteristics of cold blooded animals.

- Following are the characteristics of both warm and cold blooded animals:

Aspect	Warm-Blooded Animals (Endotherms)	Cold-Blooded Animals (Ectotherms)
Metabolism	High metabolic rate	Low metabolic rate
Body Temperature	Maintain a relatively constant body temperature independent of the environment	Body temperature varies with the external environment
Energy Source	Rely on internal heat production (metabolism) to maintain body temperature	Depend on external sources of heat for thermoregulation
Activity Levels	Can be active in a wide range of environmental conditions	Activity levels influenced by temperature; often more active in warmer conditions
Adaptability to Environments	Can inhabit diverse environments due to their ability to regulate body temperature	Limited in their habitat choices by temperature preferences
Reproductive Rate	Generally have lower reproductive rates due to high energy demands	May have higher reproductive rates due to lower energy demands
Examples	Mammals (including humans), birds	Reptiles (such as snakes, lizards), amphibians, most fish, invertebrates (except some insects)

145. Ans: a

Explanation:

- Seagrass meadows are composed of **flowering plants that grow in shallow coastal waters**, forming dense underwater carpets that can cover large areas.
 - ◆ Hence statement 1 is correct.
- They thrive in areas where sunlight can penetrate the water (**clear and calm water**), allowing them to undergo photosynthesis for growth.

- ◆ Also, they typically grow in sandy or muddy substrates, where their roots can take hold and stabilize the plant.
- ◆ Hence statement 2 is not correct.
- Seagrasses are highly effective at sequestering carbon dioxide (CO₂) from the atmosphere, making them essential in mitigating the impacts of climate change.
 - ◆ They also help to stabilize sediments, reduce coastal erosion, and improve water quality by filtering pollutants.
 - ◆ Hence statement 3 is correct.
- While most coastal regions are dominated by one or a few seagrass species, regions in the tropical waters of the Indian and western Pacific oceans have the highest seagrass diversity with as many as 14 species growing together.
 - ◆ Antarctica is the only continent without seagrasses. Hence statement 4 is correct.
 - ◆ In India, the major seagrass beds exist along the **coastline of Gulf of Mannar and Palk Bay regions on the east coast, Gulf of Kachchh region on the west coast, the lagoons of islands in Lakshadweep in the Arabian Sea and Andaman and Nicobar Islands in the Bay of Bengal.**

146. Ans: d

Exp:

Sustainable Aviation Fuel (SAF):

- About:
 - ◆ Sustainable Aviation Fuel (SAF), also referred to as **bio-jet fuel**, is created using **domestically developed methods** using **cooking oil** and **oil-rich seeds from plants**.
- Sources of Production:
 - ◆ The **CSIR-IIP** has created fuel using different materials, such as **non-edible** and **edible oils**, as well as used **cooking oil**. Hence, **statement 1 is correct**.
 - ◆ They used various sources, including **palm stearin, sapium oil, palm fatty acid distillates, algae oil, karanja, and jatropa**.
- Benefits of SAF Scaling in India:
 - ◆ **Scaling up the production and use of SAF** in India can bring several benefits, including **reducing GHG emissions, improving air quality, enhancing energy security, creating jobs in the renewable energy sector, and promoting sustainable development**.

- ◆ It can also help the **aviation industry meet its environmental targets** and contribute to global efforts to combat **climate change**.
- ◆ **Biofuel for aviation** can be mixed with regular **jet fuel** and used together. Compared to traditional fuel, it has **lower sulfur content**, which can decrease **air pollution** and support India's goal of achieving **Net Zero emissions**. Hence, **statements 2 and 3 are correct**.

147. Ans: a

Exp:

Paris Agreement on Climate Change:

- It is a global agreement under the United Nations Framework Convention on Climate Change (UNFCCC) that was adopted in 2015. Hence, **statement 1 is correct**.
- It is a **legally binding** agreement.
- It aims to combat climate change and limit global warming to well below 2°C above pre-industrial levels, with an ambition to limit warming to 1.5°C. Hence, **statement 2 is correct**.
- The Paris Agreement sets out a framework for countries to work together to reduce greenhouse gas emissions, adapt to the impacts of climate change, and provide support to developing countries in their efforts to address climate change.
- Under the Paris Agreement, each country is required to submit and update their nationally determined contributions (NDCs) every five years, outlining their plans for reducing greenhouse gas emissions and adapting to climate change. Hence, **statement 3 is not correct**.
 - ◆ NDCs are pledges made by countries to reduce their greenhouse gas emissions and to adapt to the impacts of climate change.

148. Ans: b

Exp:

What is the National Green Tribunal?

- **About:**
 - ◆ It is a **statutory body set up under the National Green Tribunal (NGT) Act, 2010** for effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources. Hence, **statement 1 is not correct**.

- ◆ With NGT, **India became the 3rd country in the world to set up a specialised environmental tribunal**, only after **Australia and New Zealand**, and the first developing country to do so.
- ◆ NGT is mandated to **make disposal of applications or appeals finally within 6 months** of filing of the same. Hence, **statement 3 is correct**.

● **Powers:**

- ◆ The Tribunal has **jurisdiction over all civil cases involving substantial questions relating to the environment** (including enforcement of any legal right relating to the environment).
- ◆ **It can take Suo Motu cognizance** of the environmental cases.
- ◆ An **order/decision/award of Tribunal is executable as a decree of a civil court**. Hence, **statement 2 is correct**.
- ◆ Apart from original jurisdiction side on filing of an application, NGT also has **appellate jurisdiction** to hear appeal as a Court (Tribunal).

149. Ans: d

Exp:

Similipal Tiger Reserve

● **About:**

- ◆ It was formally designated a tiger reserve in **1956 and brought under Project Tiger** in the year 1973. It was declared a biosphere reserve by the Government of India in June 1994.
 - It has been part of the UNESCO World Network of Biosphere Reserve since 2009. Hence, **statement 3 is correct**.
- ◆ It is part of the **Similipal-Kuldiha-Hadagarh Elephant Reserve** popularly known as Mayurbhanj Elephant Reserve, which includes 3 protected areas i.e., Similipal Tiger Reserve, Hadagarh Wildlife sanctuary and Kuldiha wildlife sanctuary.

● **Location:**

- ◆ It is situated in the **northern part of Odisha's Mayurbhanj district**. Geographically, it lies in the **eastern end of the eastern ghat**.

● **Wildlife:**

- ◆ Similipal is home to a wide range of wild animals including tigers and elephants, besides 304 species of birds, 20 species of amphibians and 62 species of reptiles.
- ◆ Similipal has the world's highest rate of black tiger sightings in the world. Hence, **statement 1 is correct**.



Black Tigers

- Black Tigers are a rare colour variant of the **Bengal tiger** and are **not a distinct species** or geographic subspecies. **Hence, statement 2 is correct.**
- The coat colouration and patterning that make the wild cats appear dark boil down to a **single mutation in the Transmembrane Aminopeptidase Q (Taqpep)** gene.

150. Ans: a

Exp:

CORSIA:

- It is a global scheme established by the ICAO to **address the growth in CO2 emissions** from international aviation.
- CORSIA **aims to stabilize net CO2 emissions at 2020 levels** through a combination of measures, including carbon offsetting, carbon credits, and sustainable aviation fuel. **Hence, statement 1 is not correct.**
- It offers a harmonized way to **reduce emissions from international aviation, minimizing market distortion**, while respecting the special circumstances and respective capabilities of ICAO Member States.
- CORSIA complements the other measures by offsetting the amount of CO2 emissions that cannot be reduced through **technological improvements, operational improvements, and sustainable aviation fuels** with emissions units from the carbon market.
- CORSIA is **applicable only to flights originating from one country to another.** Hence, statement 2 is correct.

151. Ans: C

Exp:

Petersberg Climate Dialogue 2023:

- The **Petersberg Dialogue on Climate Change** was hosted in **Berlin, Germany** from May 2-3, 2023, by **Germany and the United Arab Emirates**, which is hosting the **28th Conference of Parties (COP28)** to the **United Nations Framework Convention on Climate Change (UNFCCC)**. Hence, statement 1 is Correct.
- The Petersberg Climate Dialogue is an **annual high-level political and international forum held before the United Nations Climate Change Conferences (COP)**.
- The central goal is to **strengthen trust in multilateral climate negotiations and between states**.
- The dialogue focuses on **climate adaptation, climate finance, and dealing with loss and damage.** Hence, statement 2 is Correct.

Key Takeaways from the Dialogue:

- **Need for Clean Energy Transition:**
- **Global Renewables Target:**
- **Fossil Fuel Phaseout:**
 - ◆ **COP28 President called for a tripling of renewable energy capacity by 2030** followed by a **doubling in 2040**. And urged participants to **ramp up renewable energy capacity building** and **focus on phasing out fossil fuel emissions** while phasing up viable, affordable **zero-carbon alternatives**. Hence, statement 3 is correct.

152. Ans: D

Exp:

- **Carbon Border Adjustment Mechanism (CBAM)** is part of the **“Fit for 55 in 2030 package”**, which is the **EU’s plan to reduce greenhouse gas emissions** by at least **55% by 2030** compared to **1990 levels** in line with the **European Climate Law**. Hence, statement 1 is correct.
- To offset these emissions, importers will need to surrender a corresponding number of **CBAM certificates**, the price of which will be based on the weekly average auction price of **EU Emission Trading System (ETS)** allowances in **€/tonne of CO2 emitted**.
- It ensures that **imported goods** are subject to the same **carbon costs** as products produced within the EU. Hence, statement 2 is correct.

153. Ans: a

Exp:

- Recently, the **Ministry of Environment, Forest and Climate Change (MoEFCC)** introduced a draft notification on **Extended Producer Responsibility (EPR)** on waste oil. Hence, statement 1 is correct.
- EPR makes **producers responsible for the environmental impacts** of their products throughout their life cycle. Hence, statement 2 is correct.
- EPR is applicable to various types of waste, including **plastic waste, e-waste, and battery waste**. Hence, statement 3 is not correct.
- The E-Waste (Management and Handling) Rules, 2011 introduced **the concept of EPR for the first time in India**.

154. Ans: A

Exp:

- **Radiative forcing** is the difference between **incoming solar radiation** and **outgoing terrestrial radiation**. Hence, statement 1 is correct.



- **Positive radiative forcing** means that the amount of incoming solar energy is more than the amount of outgoing energy. Hence, statement 2 is not correct.
- **Negative radiative forcing** means that the amount of outgoing energy is more than the amount of incoming energy. It cools the earth's atmosphere system.

155. Ans: B

Exp:

- Recently, **Bhopal** became the first Indian city to track progress on **SDGs**. It has taken a significant step towards localizing the United Nations-mandated sustainable development goals (SDGs).
 - ◆ **Bhopal has become the first city in India to adopt voluntary local reviews (VLR) to demonstrate its commitment and capacity to achieving the SDGs.**
- In 2015, all 193 member states of the UN adopted the Agenda 2030, which consists of 17 SDGs and 169 targets. Member states report their progress towards these goals through voluntary national reviews (VNRs) submitted to the UN's high-level political forum (HLPF).
 - ◆ Recognizing the importance of local and regional engagement, cities and regions have increasingly undertaken their own subnational reviews known as VLRS.
- Hence, option B is correct.

156. Ans: D

Exp:

- **Methane** is the simplest hydrocarbon, consisting of one carbon atom and four hydrogen atoms (CH₄). It is flammable and is used as a fuel worldwide.
 - ◆ Methane is a powerful greenhouse gas – it has more than 80 times the warming power of carbon dioxide over the first 20 years of its lifetime in the atmosphere.
 - ◆ However, as compared to carbon dioxide, **methane has a shorter lifespan in the atmosphere. Hence, statement 1 is not correct.**
- **Global Initiatives to Tackle Methane Emissions:**
 - ◆ **Methane Alert and Response System (MARS):** MARS will integrate data from a large number of existing and future satellites that have the ability to detect methane emission events anywhere in the world, send out notifications to the relevant stakeholders to act on it.

- **MARS** has been launched by **UNEP's International Methane Emissions Observatory** (at UNFCCC COP27). Hence, statement 3 is not correct.

- ◆ **Global Methane Pledge:** At the **Glasgow climate conference (UNFCCC COP 26) in 2021**, nearly 100 countries had come together in a voluntary pledge, referred to as the Global Methane Pledge, to cut methane emissions by at least **30% by 2030 from the 2020 levels. Hence, statement 2 is not correct.**

- **India is not a part of Global Methane Pledge.**

157. Ans: D

Exp:

Mission LiFE:

- The idea of LiFE was introduced by the Prime Minister of India during the **26th United Nations Climate Change Conference of the Parties (COP26)** in Glasgow on 1st November 2021. Hence, statement 1 is correct.
- The LiFE Movement aims to utilize the power of collective action and nudge individuals across the world to undertake simple **climate-friendly actions in their daily lives.**
 - ◆ Additionally, it also seeks to leverage the strength of social networks to influence social norms surrounding climate.
- The Mission plans to create and nurture a global network of individuals, namely **'Pro-Planet People' (P3)**, who will have a shared commitment to adopt and promote environmentally friendly lifestyles. Hence, statement 2 is correct.
 - ◆ Through the P3 community, the Mission seeks to create an ecosystem that will reinforce and enable environmentally friendly behaviors to be self-sustainable.
- The Mission envisions replacing the prevalent **'use-and-dispose' economy—governed by mindless and destructive consumption**—with a circular economy, which would be defined by mindful and deliberate utilization. Hence, statement 3 is correct.

158. Ans: (a)

Exp:

- The Gharial is a unique crocodylian species that is native to India and Nepal. Hence, statement 1 is correct.
- Gharials are a species of crocodylian found in the fresh waters of the northern part of India, primarily in the Chambal River. Hence, statement 2 is correct.



- Gharials are listed as **critically endangered on the IUCN Red List** and are included on Appendix I of CITES and Schedule I of the Wildlife (Protection) Act, 1972. **Hence, statement 3 is not correct.**

159. Ans: A

Exp:

Ocean Acidification:

- Increased **carbon dioxide absorption by the ocean leads to higher acidity**. **Hence, statement 1 is correct.**
- **Reduced availability of carbonate ions** necessary for shell formation and maintenance.
- The ocean is the **most acidic in winter** because **cooler water absorbs more CO₂**. This means, the winter months are the most dangerous for the shelled sea butterflies. **Hence, statement 2 is not correct.**

160. Ans: (b)

Exp:

- The **Axolotl**, a species of **salamander (lizard-like amphibians)** possesses an **extraordinary ability to regenerate lost body parts**, inspiring researchers to delve into the secrets of this **unique regenerative power**. **Hence, statement 1 is correct.**
- **Axolotls are amphibians that spend their whole lives underwater**. They exist in the wild in only one place—**Lake Xochimilco** near **Mexico City**, a network of **artificial channels, small lakes, and temporary wetlands** that help supply water to nearby Mexico City's 18 million residents. **Hence, statement 2 is not correct.**
- The **International Union for the Conservation of Nature and Natural Resources (IUCN)** has classified the axolotl as a **critically endangered species since 2006**. **Hence, statement 3 is correct.**

161. Ans: (d)

Exp:

- The Convention on Biological Diversity (CBD) was negotiated and signed by nations at the **Earth Summit at Rio de Janeiro in Brazil on June 5, 1992**. The convention came into force on December 29, 1993. **India became a party to the convention** on February 18, 1994. **Hence, statement 1 is correct.**
- The Secretariat of the Convention on Biological Diversity (CBD) is based in Montreal, Canada. **Hence, statement 2 is correct.**

- The **Nagoya Protocol sought to ensure commercial and research utilisation of genetic resources** led to sharing its benefits with the government and the community that conserved such resources. **Hence, statement 3 is correct.**

162. Ans: D

Exp:

Chilika Lake:

- Chilika is **Asia's largest** and world's second largest lagoon. **Hence, statement 1 is correct.**
- In 1981, Chilika Lake was designated the **first Indian wetland** of international importance under the Ramsar Convention. **Hence, statement 3 is correct.**
- A major attraction at Chilika is **Irrawaddy dolphins** which are often spotted off Satapada Island. **Hence, statement 2 is correct.**
- The large **Nalabana Island** (Forest of Reeds) covering about 16 sq km in the lagoon area was declared a bird sanctuary in 1987.
- **Kalijai Temple** - Located on an island in the Chilika Lake.
- Chilika lake hosts birds migrating from thousands of miles away from the **Caspian Sea, Lake Baikal, Aral Sea, remote parts of Russia, Kirghiz steppes of Mongolia, Central and South East Asia, Ladakh** and the Himalayas.
- The birds find the **vast mud-field** and **abundant fish stock** here suitable to congregate.

163. Ans: D

Exp:

Plastic Pollution:

- **Major Polluting Plastic Waste:**
 - ◆ **Microplastics: They** are small plastic pieces of less than **five millimeters in size**.
 - **Microplastic includes microbeads** (solid plastic particles of less than one millimeter in their largest dimension) that are used in cosmetics and personal care products, industrial scrubbers, microfibers used in textiles and virgin resin pellets used in plastic manufacturing processes. **Hence, statement 1 is correct.**
 - Due to **sun exposure and physical wear**, large pieces of plastic that were not recycled break up to produce microplastics.

- ◆ **Single-use plastic:** It is a disposable material that can be used only once before it is either thrown away or recycled, like plastic bags, water bottles, soda bottles, straws, plastic plates, cups, most food packaging and coffee stirrers are sources of single use plastic.

- **Initiatives to Tackle Plastic Pollution:**

- ◆ **Indian:**

- Plastic Waste Management (Amendment) Rules, 2022
- Extended Producer Responsibility (EPR)
- National Dashboard on Elimination of Single Use Plastic and Plastic Waste Management
- India Plastics Pact
- Project REPLAN

- ◆ **Global:**

- European Union' Directive on Single-Use Plastics
- **Closing the loop.**

- **Hence, statement 2 is correct.**

- The Global Tourism Plastics initiative

164. Ans: A

Exp:

- Stone crushing units have long been recognized as major contributors to fugitive dust emissions and severe air pollution.
- In response to the growing concern, the **Central Pollution Control Board (CPCB) recently published the Environmental Guidelines for Stone Crushing Units. Hence, statement I is correct.**
- The CPCB is a statutory organisation that was established in September 1974 under the Water (Prevention and Control of Pollution) Act, 1974.
 - ◆ Further, CPCB was entrusted with the powers and functions under the Air (Prevention and Control of Pollution) Act, 1981.
- **It is the apex body for environmental protection and pollution control in India. It functions under the Ministry of Environment, Forest and Climate Change (MoEFCC) and coordinates with the State Pollution Control Boards (SPCBs) and other agencies. Hence, statement II is correct and statement II is correct explanation of statement I**

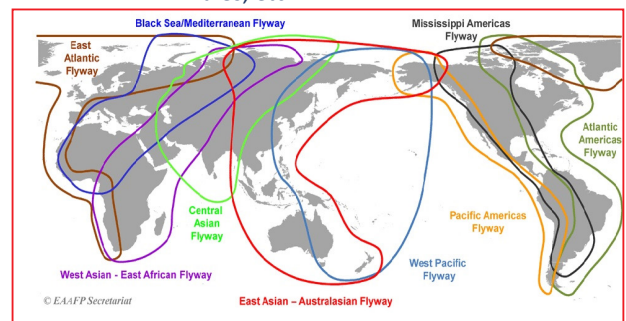
165. Ans: A

Exp:

Convention on Migratory Species (CMS):

The Ministry of Environment, Forest, and Climate Change in collaboration with the **United Nations Environment Programme/ Convention on Migratory Species (UNEP/ CMS)** had organized a meeting of Range Countries to strengthen conservation efforts for migratory birds and their habitats in the **Central Asian Flyway (CAF)**.

- It is an intergovernmental treaty under the **UNEP** popularly **known as Bonn Convention**. It was signed in 1979 and in force since 1983. India is also a party to CMS since 1983. **Hence, statement 1 is correct.**
- It lays the legal foundation to conduct conservation measures on a global scale. The legal instruments under CMS may range from legally binding Agreements to less formal MoU.
 - ◆ It aims to conserve terrestrial, marine and avian migratory species throughout their range. **Hence, statement 2 is not correct.**
- **India and the CMS:**
 - ◆ India has signed a **non-legally binding Memorandum of Understanding (MoU)** with CMS on conservation and management of **Siberian Cranes (1998), Marine Turtles (2007), Dugongs (2008), and Raptors (2016)**. **Hence, statement 3 is not correct.**
 - ◆ With 2.4% of the world's land area, India contributes to around 8% of the known global biodiversity.
 - India also provides **temporary shelter** to several migratory species including **Amur Falcons, Bar-headed Geese, Black-necked Cranes, Marine Turtles, Dugongs, Humpback Whales, etc.**



166. Ans: C

Exp:

- The CBAM will initially apply to imports of certain goods and selected precursors whose production is carbon intensive and at most significant risk of carbon leakage. Hence, statement 1 is correct.
- The CBAM will enter into force in its transitional phase as of 1 October 2023 in Europe.
- This includes the following carbon intensive products such as cement, iron and steel, aluminum, fertilizers, electricity and hydrogen. Hence, statement 2 is correct.

167. Ans: c

Exp:

The Direct Reduction Process by Hydrogen in Steel Making

- Direct reduction by hydrogen (DR-H) in steel making is a process that uses hydrogen gas to reduce iron oxide (Fe₂O₃) into metallic iron (Fe) without the use of a blast furnace. Hence, statement 1 is correct.
- This method is also known as the “green route” for steel production, as it significantly reduces the carbon emissions associated with traditional steelmaking processes. Hence, statement 2 is correct.
- The Direct Reduction process typically involves mixing iron ore pellets or lumps with hydrogen gas in a reactor vessel at temperatures ranging from 600 to 800°C.
- The hydrogen reacts with the iron oxide to form metallic iron and water vapor.

168. Ans: c

Exp:

Pygmy Hog:

- **Scientific Name:**
 - ◆ *Porcula Salvania*
- **Habitat:**
 - ◆ It thrives in wet grassland.
 - ◆ Once, it used to be found along a narrow strip of tall and wet grassland plains on the Himalayan foothills – from UP to Assam, through Nepal’s terai areas, Bhutan and Bengal’s duars.
 - Today, it is found only in India (Assam). Hence, statement 1 is correct.
- **Protection Status:**
 - ◆ IUCN Red List: Endangered. Hence, statement 2 is not correct.
 - ◆ CITES: Appendix I
 - ◆ Wildlife (Protection) Act, 1972: Schedule I

- **Conservation Effort - Pygmy Hog Conservation Programme 1995:**

- ◆ Once thought to be extinct, it was rediscovered in 1971. The Durrell Wildlife Conservation Trust, UK, initiated the Pygmy Hog Conservation Programme in 1995 in collaboration with IUCN, Assam Forest Department and MoEF&CC.
 - It is currently being implemented by NGOs - Aaranyak and EcoSystems India. Hence, statement 3 is correct.

169. Ans: c

Exp:

Major Protected Areas in Odisha:

- Bhitarkanika National Park.
- Chilika (Nalaban island) WLS.
- Baisipalli WLS.
- Nandankanan WLS.
- Gahirmatha (Marine) WLS.

Intangki Wildlife Sanctuary and Namdapha National Park are in Nagaland and Arunachal Pradesh respectively. Hence, option c is the correct answer.

170. Ans: b

Exp:

Leopard:

- **About:**
 - ◆ Leopards are elusive and nocturnal animals whose size and colour depend on the habitat. They are great climbers and hide in trees, where they hide their prey to avoid competition.
- **Geographical Extent:**
 - ◆ Members of the cat family, leopards live in Asia, sub-Saharan Africa, Southern Russia, and the Indian subcontinent.
 - The Indian leopard (*Panthera pardus fusca*) is a leopard widely distributed on the Indian subcontinent.
- **Protection Status:**
 - ◆ IUCN Red List: Vulnerable
 - ◆ CITES: Appendix I.
 - ◆ Wildlife Protection Act 1972: Schedule I
- Hence, option b is the correct answer.

171. Ans: D

Expl:

- Only the Great One-Horned Rhino is found in India. Hence, statement 1 is correct.
- Also known as the Indian rhino, it is the largest of the rhino species. It is identified by a single black horn and a grey-brown hide with skin folds.

- The species is restricted to small habitats in Indo-Nepal terai and northern West Bengal and Assam. **Hence, statement 3 is correct.**
- The Great One-Horned Rhino is listed as Vulnerable in IUCN Red List, mentioned in Appendix I in CITES and in Schedule I of the Wildlife Protection Act, 1972. **Hence, statement 2 is correct.**

172. Ans: C

Exp:

- **About:**
 - ◆ The **National Mission on Natural Farming (NMNF)** has been formulated by upscaling the **Bhartiya Prakritik Krishi Paddhati (BPKP)** to promote natural farming across the country.
 - ◆ **Coverage:**
 - ◆ NMNF will cover a **7.5 lakh hectare area by developing 15,000 clusters.** The farmers willing to implement natural farming on their field will be **registered as cluster members**, each cluster shall comprise **50 farmers or more with 50-hectare land.** **Hence, statement 1 is correct.**
- Also, **each cluster can fall into one village** or spread across 2-3 nearby villages under the same gram panchayat.
- **Financial Assistance:**
 - ◆ Under NMNF, farmers will receive a **financial assistance of ₹15,000 per hectare per year for three years** for the creation of on-farm input production infrastructure.
 - ◆ However, the **incentives would be provided to farmers only when they commit to natural farming** and have actually taken it up.
 - ◆ If a farmer defaults or does not continue with natural farming, subsequent instalments shall **not be disbursed.**
- **Web Portal for Implementation Progress:**
 - ◆ A **Web portal** has also been launched for the **promotion of natural farming with information on the implementation framework**, resources, implementation progress, farmer's registration, blog, and so on. **Hence, statement 2 is correct.**

173. Ans: a

Exp:

- Waste Processing in India has gone up by over 4 times from 17% in 2014 to 75% in 2023, aided through 100% door-to-door waste collection in 97% wards and source segregation of waste being practiced by citizens across almost 90% wards in all ULBs in the country. **Hence, statement 1 is correct.**

- The Garbage Free Cities (GFC)-Star rating protocol launched in January 2018. **Hence, statement 2 is not correct.**

174. Ans: b

Exp:

- Salt marshes protect shorelines from erosion by **creating a buffer against wave action and by trapping soils.** **Hence, statement 1 is not correct.**
- construction of seawalls and other structures along the coast, can prevent salt marshes from migrating landward. where the **marshes are squeezed between rising seas and man-made barriers.** This phenomenon is called **Coastal Squeeze.** **Hence, statement 2 is correct.**

175. Ans: A

Exp:

- The United Nations held its **first water conference in 46 years** on March 2023 in New York. **Hence, statement 1 is correct.**
- The **UN 2023 Water Conference's theme, "Our watershed moment: uniting the world for water,"** aimed to support the achievement of water-related global goals and objectives, including those enumerated in the **2030 Agenda for Sustainable Development.** **Hence, statement 2 is correct.**
- The U.N. recognized that we are not doing enough to **meet SDG 6**, which aims to provide clean water and sanitation for everyone by 2030. Clean water and Sanitation are a part of the 6th goal of SDGs. **Hence, statement 3 is not correct.**

176. Ans: C

Exp:

- **UNFCCC** was signed in **1992 at the United Nations Conference on Environment (UNCE) and Development** also known as the **Earth Summit, the Rio Summit or the Rio Conference.** **Hence, statement 1 is correct.**
- The **UNFCCC** entered into force in 1994 and has been ratified by 197 countries.
- It is the parent treaty of the 2015 Paris Agreement. It is also the **parent treaty of the 1997 Kyoto Protocol.** **Hence, statement 2 is correct.**
- Its **objective is to achieve stabilisation of greenhouse gas concentrations** in the atmosphere at a level that would prevent dangerous repercussions within a time frame so as to allow ecosystems to adapt naturally and enable sustainable development.



177. Ans: A

Exp:

- The Gulf of Mannar Biosphere Reserve (GoMBR) is home to 21 islands that serve as habitats for coastal birds migrating as far as the Arctic Circle. It is **India's first marine biosphere reserve**. Hence, **statement 1 is correct**.
- Convention on the Conservation of Migratory Species (CMS) or **Bonn Convention (1979)** is an intergovernmental treaty that aims to **conserve terrestrial, marine and avian migratory species** throughout their range. Hence, **statement 2 is correct**.
- The Chilean mesquite (*Prosopis chilensis* (Molina) Stuntz) is a drought-resistant plant native to **South American countries** namely **Argentina, Bolivia, Chile, and Peru**. Hence, **statement 3 is not correct**.

178. Ans: D

Exp:

- **Reserve forests are the most restricted forests** and are **constituted by the State Government** on any forest land or wasteland which is the property of the Government.
 - ◆ Degree of Protection:
- **Reserved forests > Protected forests > Village forests**. Hence, **statement 1 is not correct**.
- Through the **42nd Amendment Act, 1976 Forests and Protection of Wild Animals and Birds** were transferred from **State to Concurrent List**. Hence, **statement 2 is not correct**.

179. Ans: (a)

Exp:

- The Mangrove Pitta is a species of bird that can be found in a few pockets of eastern India, including Odisha's Bhitarkanika and West Bengal's Sundarbans. Hence, **statement 1 is correct**.
- The IUCN (International Union for Conservation of Nature) has categorized and evaluated the species and has listed it as "**Near Threatened**". Hence, **statement 2 is not correct**.

180. Ans: a

Exp:

- Earth Day is an annual event celebrated on 22nd April to raise awareness about the need to protect our planet and its environment. In 2009, the United Nations designated 22nd April as 'International Mother Earth Day'. Hence, **statement 1 is correct**.

- The theme for Earth Day 2023 is "Invest in our planet," which calls on businesses, investors, financial markets, and governments to lead the way in building a healthier and more equitable global system. Hence, **statement 2 is not correct**.
- 'One Earth One Family One Future' is the theme of G20 selected by India for its presidency.
- The landmark Paris Agreement, which aims to reduce global greenhouse emissions, was signed on Earth Day 2016. Hence, **statement 3 is correct**.

181. Ans: d

Exp:

Gandhi Sagar Wildlife Sanctuary:

- It is located in Madhya Pradesh on the northern boundary of the Mandsaur and Nimach districts, adjoining Rajasthan. Hence, **statement 1 is not correct**.
- The landscape is characterized by vast open landscapes and rocky terrain.
- The vegetation includes northern tropical dry deciduous forest, mixed deciduous forest, and scrub. Hence, **statement 2 is not correct**.
- Some of the flora found in the sanctuary are Khair, Salai, Kardhai, Dhawda, Tendu, and Palash.
- The fauna includes Chinkara, Nilgai, Spotted Deer, Striped Hyena, Jackal and crocodiles. Hence, **statement 3 is not correct**.
- Dancing Deer is the popular name of Sangai Deer, which is found in Keibul Lamjao National Park (KLNPN) in Loktak Lake in Manipur.

182. Ans: a

Exp:

Olive Ridley Turtles:

- The Olive ridley turtles are the **smallest and most abundant of all sea turtles** found in the world. Hence, **statement 3 is correct**.
- These turtles are **carnivores** and get their name from their **olive-colored carapace**.
- They are best known for their **unique mass nesting called Arribada**, where thousands of females come together on the same beach to lay eggs. Hence, **statement 2 is correct**.
- They are found in **warm waters of the Pacific, Atlantic, and Indian oceans**.
- **Odisha's Gahirmatha Marine Sanctuary** is known as the **world's largest rookery (a colony of breeding animals) of sea turtles**.

- **Protection Status:**
 - ◆ **Wildlife Protection Act, 1972:** Schedule 1
 - ◆ **IUCN Red List:** Vulnerable **Hence, statement 1 is not correct.**
 - ◆ **CITES:** Appendix I

183. Ans: c

Exp:

What are Eco-Sensitive Zones?

- **Governing Statute:**
 - ◆ The **National Wildlife Action Plan (2002-2016)** of the **MoEFCC** stipulated that state governments should declare land falling **within 10 km of the boundaries of national parks and wildlife sanctuaries** as eco-fragile zones or **Eco-Sensitive Zones (ESZs)** under the **Environmental (Protection) Act, 1986**. **Hence, statement 1 is not correct.**
- **Extent:**
 - ◆ While the **10-km rule is implemented as a general principle**, the extent of its application can vary.
 - ◆ **Areas beyond 10 km can also be notified by the Union government as ESZs**, if they hold larger ecologically important **“sensitive corridors”**. **Hence, statement 2 is not correct.**

184. Ans: d

Exp:

The Gangetic Dolphin:

- It is a freshwater dolphin species found in the Ganges and Brahmaputra river systems of India, Bangladesh and Nepal. **Hence, statement 1 is correct.**
- The Gangetic Dolphin is listed as Endangered in the IUCN Red List of Threatened Species due to a number of factors including habitat loss, water pollution, accidental entanglement in fishing nets, and poaching for its oil and meat. **Hence, statement 2 is correct.**
- It uses echolocation to navigate and find prey in the murky waters of the rivers it inhabits. **Hence, statement 3 is correct.**

185. Ans: D

Exp:

Net-Zero Target:

- It is referred to as **carbon neutrality**, which does not mean that a country would bring down its emissions to zero. **Hence, statement 1 is correct.**
- Rather, it is a **state in which a country's emissions are compensated by the absorption and removal of greenhouse gases from the atmosphere.**

- ◆ Further, **absorption of the emissions can be increased by creating more carbon sinks** such as forests.

- While the removal of gases from the atmosphere requires **futuristic technologies such as carbon capture and storage.**

- More than 70 countries have promised to become Net Zero by the middle of the century i.e., by 2050. **Hence, statement 2 is correct.**
- India has promised to **cut its emissions to net zero by 2070** at the **Conference of Parties - 26(COP)** summit. **Hence, statement 3 is correct.**

186. Ans: c

Exp:

Olive Ridley Turtles:

- The Olive ridley turtles are the **smallest and most abundant of all sea turtles** found in the world.
- These turtles are **carnivores** and get their name from their **olive-colored carapace.**
- They are best known for their **unique mass nesting called Arribada**, where thousands of females come together on the same beach to lay eggs. **Hence, option d is the correct answer.**
- They are found in **warm waters of the Pacific, Atlantic, and Indian oceans.**
- **Odisha's Gahirmatha Marine Sanctuary** is known as the **world's largest rookery (a colony of breeding animals) of sea turtles.**

187. Ans: C

Exp:

National Green Tribunal (NGT)

- It is a **specialised body set up under the National Green Tribunal Act (2010)** for **effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources.**
- The Tribunal comprises the Chairperson, the Judicial Members and Expert Members. They shall hold office for a term of three years or till the age of sixty-five years, whichever is earlier and are not eligible for reappointment.
- The **Chairperson is appointed by the Central Government in consultation with Chief Justice of India (CJI)**. **Hence, statement 1 is correct.**

- In October 2021, the Supreme Court declared the NGT position as a “**unique**” forum endowed with suo motu (on its own motion) powers to take up environmental issues across the country. Hence, statement 2 is correct.

188. Ans: B

Exp:

- The Kunming-Montreal Global Biodiversity Framework is not a legally binding agreement, but the governments who have signed commit to demonstrate progress towards meeting targets and updating their National Biodiversity Strategy and Action Plans (NBSAPs) accordingly. Hence, statement 1 is not correct.
- It includes a target to protect at least 30% of the planet’s land and marine areas by 2030.
 - ◆ This target is intended to ensure that important ecosystems and biodiversity are conserved and that the benefits they provide to people are sustained. Hence, statement 2 is correct.

189. Ans: d

Exp:

- Bandipur Tiger Reserve lies in one of the richest biodiversity areas of our country representing “Western Ghats Mountains Biogeography Zone”, in the Nilgiri biosphere reserve. Hence, statement 1 is not correct.
- Himavad Gopalswamy Betta is the highest point in Bandipur national park, while Doddabetta Peak is highest in peak in Nilgiri Mountains. Hence, statement 2 is not correct.

190. Ans: A

Exp:

- The Institute for Energy Economics and Financial Analysis (IEEFA) is a non-profit research organization that provides analysis and commentary on energy markets, policies, and investments.
- The organization focuses on the financial and economic aspects of the energy transition to a low-carbon future, with a particular emphasis on the electricity sector.
- IEEFA conducts research, produces reports, and engages in advocacy efforts aimed at promoting sustainable energy policies and investments. Hence, option A is correct.

191. Ans: D

Exp:

World Wildlife Day:

- About:
 - ◆ World Wildlife Day has been celebrated every year on the 3rd of March since 2013. Hence, statement 1 is correct.
 - ◆ The date chosen coincides with the day of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) which was signed in 1973. Hence, statement 3 is correct.
 - ◆ The UNGA (General Assembly) resolution also designated the CITES Secretariat as the facilitator for the global observance of this special day for wildlife on the UN (United Nations) calendar.
- Theme:
 - ◆ The theme of this year is ‘Partnerships for Wildlife Conservation’ which expanded into the conservation of marine life and oceans, and on collaborating with businesses and funding conservation activities. Hence, statement 2 is correct.

192. Ans: C

Exp:

- Teak (*Tectona grandis*) also known as sagon, sagwan, Indian oak, and teca. Hence, statement 1 is correct.
- Its production covers 1% of global annual timber demand. Hence, statement 2 is not correct.
- Teak, is a large deciduous tree native to India, Myanmar, Laos and Thailand. Teak is highly tolerant of a range of climate conditions and can be found from very dry to very moist regions. It is high resistance to decay and insect damage, and the heartwood changes from olive green to golden brown after exposure.
- This wood species is listed in the IUCN Red List of Threatened Species as endangered, but not listed in the CITES. Hence, statement 3 is correct.
- African teak (*Pericopsis elata*), also known as Afrormosia, Kokrodua and Assamela, has brown, green or yellow-brown bark. The African teak is classified as Endangered on the IUCN Red List 2004, and is listed on Appendix II of CITES.



193. Ans: C

Exp:

- **About Sea Horse:**
- Sea horses are **tiny fish that are named for the shape of their head**, which looks like the head of a tiny horse. They are classified as fish, in the **genus Hippocampus**. **Hence, statement 1 is correct.**
- There are **46 species** of seahorses reported **worldwide**. The coastal ecosystems of **India house 9 out of 12 species found in the Indo-Pacific**.
- They are found in **shallow coastal waters** in latitudes from about **52° N to 45°S**.



- Seahorse populations in India are **distributed across diverse ecosystems** such as **seagrass, mangroves, macroalgal beds, and coral reefs**.
- **Distribution in India:**
- These 9 species are **distributed along the coasts of eight States and five Union Territories from Gujarat to Odisha, apart from Lakshadweep and the Andaman and Nicobar Islands**. **Hence, statement 2 is not correct.**
- **Slow Swimmers:**
- When swimming they maintain a vertical position and propel themselves forward using a soft-rayed dorsal fin.
- They **migrate by rafting, clinging to floating substrata** such as macroalgae or plastic debris for dispersal by ocean currents.
- **Unique Reproductive Habits:**

- The **male gives birth to child** as the female uses an ovipositor (egg duct) to place her eggs into a brood pouch located at the base of the male's tail where the eggs are later fertilized. **Hence, statement 3 is correct.**
- **Conservation Status:**
- **IUCN status-Vulnerable**
- **CITES: Appendix II**

194. Ans: C

Exp:

- It is a mechanism **for forest monitoring, tracing and labelling** timber, wood and pulp products and non-timber forest products. **Hence, statement 1 is correct.**
- It is a process through which quality of management from environmental, social and economic perspectives is judged against a series of agreed standards.
- There are two major international standards for sustainable management of forests and forest-based products,
 - ◆ One has been developed by Forest Stewardship Council (FSC);
 - ◆ The other by Programme for Endorsement of Forest Certifications (PEFC).
- The forest certification industry has been operating in India for the last 15 years.
- Currently, **forests in only Uttar Pradesh are certified**. **Hence, statement 2 is correct.**
- Forest certification in India is still at an early stage and therefore the nation has not been able to make use of the benefits of forest certification.

195. Ans: C

Exp:

Mugger or Marsh Crocodile:

Description:

- It is **one of the 24 extant species of crocodylians** found globally. **Hence, statement 1 is not correct.**
 - ◆ Estuarine or Saltwater Crocodile is considered the **Earth's largest living crocodile species**. **Hence, statement 2 is not correct.**
- The mugger is an egg-laying and hole-nesting species.
- The mugger is also **known to be dangerous**.

Habitat:

- It is mainly restricted to the Indian subcontinent where it may be found in a number of freshwater habitat types including rivers, lakes and marshes. However, it can even be found in coastal saltwater lagoons and estuaries.

- It is already **extinct in Bhutan and Myanmar.**

Threats:

- Habitat destruction, fragmentation, and transformation, fishing activities and use of crocodile parts for medicinal purposes.

Protection Status:

- **IUCN List of Threatened Species: Vulnerable Hence, statement 3 is correct.**
- **CITES: Appendix I**
- **Wildlife Protection Act, 1972: Schedule I**

196. Ans: c

Exp:

- **About Great Indian Bustard:**
 - ◆ The **Great Indian Bustard (*Ardeotis nigriceps*)**, the **State bird of Rajasthan**, is considered India's **most critically endangered bird.**
 - ◆ It is considered the **flagship grassland species**, representing the health of the grassland ecology.
 - ◆ Its population is confined mostly to Rajasthan and Gujarat. Small populations occur in Maharashtra, Karnataka and Andhra Pradesh. **Hence, statement 2 is correct.**



- **Vulnerability:**
 - ◆ The bird is under **constant threats due to collision/electrocution with power transmission lines**, hunting (still prevalent in Pakistan), habitat loss and alteration as a result of widespread agricultural expansion, etc.
- **Protection Status:**
 - ◆ **IUCN red List: Critically Endangered, Hence, statement 1 is correct.**

- ◆ **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES): Appendix 1**
- ◆ **Convention on Migratory Species (CMS): Appendix I**
- ◆ **Wildlife (Protection) Act, 1972: Schedule I**

197. Ans: B

Exp:

Kalakkad – Mundanthurai Tiger Reserve (KMTR):

- Popularly known as KMTR, this reserve **was created in 1988 by combining the existing** and contiguous Kalakkad and Mundanthurai wildlife sanctuaries.
- Kalakkad – Mundanthurai was declared as the **first Tiger reserve in Tamil Nadu.** It occupies the southern part of the Western Ghats and consists of wet evergreen forests; it is the catchment area of 14 rivers. **Hence, statement 1 is not correct.**
- It is also part of the Agasthyamala Biosphere Reserve. **Hence, statement 2 is correct.**
 - ◆ **Agasthyamala Biosphere Reserve** is considered one of the five centres of plant diversity and endemism in India by the **International Union for Conservation of Nature (IUCN).**

198. Ans: D

Exp:

- The **MoEFCC** released the **Action Plan for Vulture Conservation 2006** with the **Drugs Controller General of India (DCGI)** banning the veterinary use of **diclofenac.** **Hence, statement 1 is correct.**
- It carries out **safety testing** of available **NSAIDs** on **vultures** and to develop new ones which do not affect vultures.
- **Action Plan for Vulture Conservation 2006** prevents the poisoning of the principal food of vultures, the cattle carcasses with veterinary NSAIDs. **Hence, statement 2 is correct.**

199. Ans: C

Exp:

- **Ocean acidification** occurs when the **pH of seawater decreases** as a result of **dissolved carbon dioxide.** **Hence, statement 1 is correct.**
- **Carbon dioxide** is being absorbed from the atmosphere at a rate that exceeds the **oceans' natural buffering capacity.**
- **Ocean acidification** makes it difficult for many marine organisms to build and maintain their **shells** and **skeletons.** **Hence, statement 2 is correct.**

200. Ans: D

Exp:

- **About:**
- IQAir, a Swiss air quality technology company, prepares the **annual world air quality reports** based on **data from monitoring stations** operated by governments and other institutions and organisations across the world. **Hence, statement 1 is not correct.**
- The 2022 report is based on PM2.5 data **from 7,323 cities and 131 countries.**
- **Findings:**
 - ◆ **Chad, Iraq, Pakistan, Bahrain, and Bangladesh** are the 5 most polluted countries in 2022.
 - ◆ **Delhi** had an average **PM2.5 level of 92.6 µg/m3 in 2022**, a little below the average of **96.4 µg/m3 in 2021.**
 - ◆ The report makes a distinction between New Delhi and Delhi, with New Delhi having an annual average PM2.5 level of 89.1 µg/m3.
 - ◆ The **WHO guideline** for annual PM2.5 levels is **5 µg/m3.**
 - ◆ **Lahore** was the most polluted city in the world, followed by **Hotan in China**, and **Bhiwadi in Rajasthan.**
 - ◆ **New Delhi is the second most polluted capital city** in the world, with N'Djamena in **Chad** topping the list. **Hence, statement 2 is not correct.**
 - A total of **39 Indian cities (including 'Delhi' and 'New Delhi')** are on the list of 50 of the world's most polluted cities based on annual average **PM2.5 levels in 2022.**

201. Ans: D

Exp:

- **Eutrophication** is a **natural or human-induced process** where a **water body**, such as a **lake, river, or ocean**, becomes excessively rich in nutrients like **nitrogen and phosphorus. Hence, statement 1 is correct.**
- Excess nutrients can lead to the overgrowth of algae and other aquatic plants, which can form dense mats on the water surface known as **algal blooms.**
- Oxygen depletion can result in areas of the water body becoming **hypoxic**, which means there is not enough oxygen to support aquatic life.
- **Algal bloom** and **Hypoxia** in the water body are the two most prominent outcomes of **eutrophication. Hence, statement 2 is correct.**

202. Ans: D

Exp:

- **Horseshoe crabs, medicinally priceless and one of oldest living creatures** on the earth, appear to be **disappearing** from their familiar spawning grounds due to destructive fishing practices along Chandipur and Balaramgadi coast in **Odisha's Balasore** district. **Hence, statement 1 is correct.**
- India has two species of Horseshoe crabs- the **coastal horseshoe crab (*Tachypleus gigas*)**, the **mangrove horseshoe crab (*Carcinoscorpius rotundicauda*)** and major concentration of the animal is found in Odisha. **Hence, statement 2 is correct.**
- Both these species are not listed on **IUCN red list** yet but are part of **Schedule 4 of Wildlife Protection Act, 1972. Hence, statement 3 is correct.**
- The **blood of Horseshoe crab** is very **important for preparation of rapid diagnostic reagent.** All injectable and medicines are tested with the help of Horseshoe crabs. A molecule has been developed from reagent of Horseshoe crab that would **help treat pre-eclampsia**, a disease affecting pregnant women.
- Palaeontological studies say the **age of Horseshoe crabs is 450 million years.** The creature has lived on earth without undergoing any morphological change due to its strong immune system

203. Ans: C

Exp:

- Due to the loss of their **symbiotic algae**, corals become white and lose their **vibrant colors. Hence, statement 1 is not correct.**
- Warmer water temperatures can result in **coral bleaching.**
- **Zooxanthellae**, a kind of algae, are frequently seen in symbiotic relationships with corals. **Hence, statement 2 is not correct.**

204. Ans: d

Exp:

- The National Chambal Sanctuary is located along the **Chambal River**, which is a **tributary of the Yamuna River.** The sanctuary is spread across three states in India - Uttar Pradesh, Madhya Pradesh, and Rajasthan. **Hence statement 1 is not correct.**
- The **Wildlife Protection Act, 1972** is an important legislation for the conservation and protection of wildlife in India. **The gharial, which is found in the National Chambal Sanctuary, is listed under Schedule I of the Act.** and as Critically Endangered on IUCN Red List. **Hence statement 2 is not correct.**



205. Ans: C

Exp:

- The scientific name of Sarus Crane is ***Grus Antigone***. It is the **tallest flying bird in the world**, standing 152-156 cm tall with a wingspan of 240cm. The Sarus crane has predominantly **grey plumage with a naked red head, upper neck, and pale red legs**. It is known to mate for life with a single partner, and its breeding season coincides with heavy rains during the monsoon season. **Hence, statement 2 is correct.**
- The sarus crane is listed in **Schedule IV of the Wildlife Protection Act of 1972**, **Hence, statement 1 is correct.**
- Further, it is listed as **vulnerable on the IUCN Red List**, and it is predominantly found in **India, Southeast Asia, and Australia**. **Hence, statement 3 is not correct.**

206. Ans: D

Exp:

- **Gudi Padwa and Ugadi:**
 - ◆ These festivals are celebrated by the people in the **Deccan region** including **Karnataka, Andhra Pradesh and Maharashtra**.
 - ◆ A famous **concoction served is jaggery (sweet) and neem (bitter)**, called **bevu-bella in the South**, signifying that life brings both happiness and sorrows.
 - ◆ **Gudi is a doll prepared in Maharashtrian homes.**
 - For Ugadi, doors in homes are **adorned with mango leaf decorations** called toranalu or Torana in Kannada.
- **Sajibu Cheiraoba:**
 - ◆ It is considered one of the most important festivals of **Manipur**.
 - ◆ It is celebrated with great pomp and joy, especially by the **Meiteis of the state**.
- **Bohag Bihu:**
 - ◆ **Bohag Bihu or Rongali Bihu also called Xaat Bihu** (seven Bihus) is a traditional aboriginal ethnic festival celebrated in **the state of Assam and other parts of northeastern India** by the indigenous ethnic groups of Assam.
 - ◆ It marks the beginning of the **Assamese New Year**.
 - ◆ It usually falls in the **2nd week of April**, historically signifying the time of harvest.

Hence, all three pairs are correct.

207. Ans: D

Exp:

- **About Project Elephant:**
 - ◆ It was launched in **1992 as a Centrally Sponsored Scheme** with an aim to protect elephants and improve their habitat and corridors, reduce **Human-elephant conflict** and ensure their welfare. **Hence, statement 1 is correct.**
 - ◆ As many as 33 elephant reserves, spanning 80,777 sq km, have been notified.
- It provides financial and technical support to wildlife management efforts by states for their **free-ranging populations of wild Asian Elephants**. **Hence, statement 2 is correct.**
- The project aims to ensure the long-term survival of the populations of elephants in their natural habitats by protecting the elephants, their habitats and migration corridors.
- Other goals of Project Elephant are **supporting the research of the ecology and management of elephants, creating awareness of conservation among local people**, and providing improved veterinary care for captive elephants. **Hence, statement 3 is correct.**

208. Ans: D

Exp:

India's Initiatives Related to the Shipping Sector:

- **National Centre of Excellence in Green Port & Shipping (NoCEGPS):**
 - ◆ India's first NoCEGPS is a collaboration between the **Ministry of Ports, Shipping & Waterways (MoPSW) and the Energy and Resources Institute**. It is in **Gurugram, Haryana**.
 - The centre is aimed at playing a crucial role in achieving the UN's Sustainable Development Goal (14) to sustainably manage and protect marine and coastal ecosystems from pollution, conservation, and sustainable use of ocean-based resources.
 - The centre will develop the regulatory framework and alternative technology adoption roadmap for green shipping in India, meeting the obligations under the Paris Agreement.
 - ◆ **NCoEGPS will act as a technological arm of MoPSW** for providing the needed support on Policy, Research and Cooperation on Green Shipping areas for Ports, DG Shipping, CSL and other institutions under the umbrella of MoPSW.

● **Green Tug Transition Programme:**

- ◆ The **Green Tug Transition Programme** will start with '**Green Hybrid Tugs**' powered by **Green Hybrid Propulsion systems** and subsequently adopting **non-fossil fuel solutions like Methanol, Ammonia, and Hydrogen**.
- The target is to have the initial Green Tugs working in all major ports by 2025, and **50% of all Tugs converted into Green Tugs by 2030. Hence, statement 1 is correct.**

● **PM Gati Shakti:**

- ◆ The development of green logistics supply chains in the country has already accelerated through the **PM Gati Shakti - National Master Plan** for Multi-Modal Connectivity along with the Green Ports initiative.
- The ports aim to **reduce carbon emissions per ton of cargo handled by 30% by 2030. Hence, statement 2 is correct.**

● **The Green Voyage 2050 Project:**

- ◆ It is a partnership project between the **Government of Norway and International Maritime Organisation (IMO)** launched in May 2019 aiming to transform the shipping industry towards a **lower carbon future. Hence, statement 3 is correct.**

209. Ans: A

Exp:

- Biotransformation is the process of using **biological organisms, such as bacteria or fungi, to break down and transform pollutants into less harmful compounds**. This is a natural process that occurs in the environment, but biotransformation technology is used to accelerate the process and remediate contaminated sites more quickly. **Hence Statement 1 is correct.**
- Plastics made using this technology are given a pre-programmed time during which the **manufactured material looks and feels like conventional plastics without compromising on quality**. Once the product expires and is exposed to the external environment, it **self-destructs, and bio transforms into bioavailable wax. Hence statement 2 is correct.**
- While biotransformation technology can be an environmentally friendly way to remediate contaminated sites, it can have negative impacts if not managed properly. For example, if the process is not carefully controlled, it can release toxic byproducts into the environment. **Hence Statement 3 is not correct.**

210. Ans: C

Exp:

● **About:**

- ◆ The Asiatic Lion (also known as the **Persian Lion or Indian Lion**) is a member of the **Panthera Leo Leo** subspecies that is **restricted to India**.
- ◆ Its **previous habitats consisted of West Asia** and the Middle East before it became extinct in these regions.
 - Asiatic lions are **slightly smaller than African lions**.

● **Distribution:**

- ◆ Asiatic lions were **once distributed to the state of West Bengal in east and Rewa in Madhya Pradesh**, in central India.
- ◆ At present **Gir National Park and Wildlife Sanctuary** is the only abode of the Asiatic lion. **Hence, statement 1 is correct.**

● **Protection Status:**

- ◆ **IUCN Red List:** Endangered
- ◆ **CITES:** Appendix I
- ◆ **Wildlife (Protection) Act 1972:** Schedule I, **Hence, statement 2 is correct.**

211. Ans: (d)

Exp:

- There are five species of rhino – **white and black rhinos** in Africa, and the **greater one-horned, Javan and Sumatran rhino** species in Asia. Greater one horned rhino is largest among them. **Hence statement 2 is correct.**
- **Only the Great One-Horned Rhino is found in India. Hence statement 1 is correct.**
- Protection status under IUCN – **VU (Vulnerable). Hence statement 3 is correct.**

212. Ans: B

Exp:

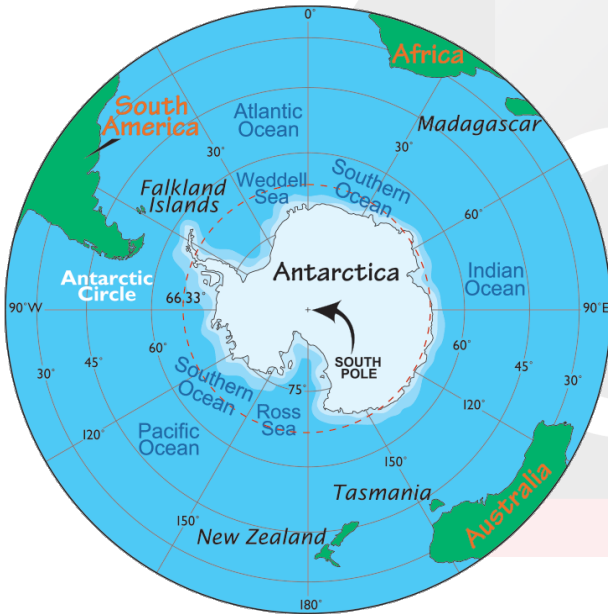
Marine Protected Areas:

Recently, the Ministry of Earth Sciences, Government of India has announced that India will support setting up two **Marine Protected Areas (MPA)** in **Antarctica** to protect marine life and its ecosystem services.

- ◆ An MPA is a place where people take care of the sea life, the environment and the culture. Some things are not allowed or limited in the MPA to help with this. MPAs can have different purposes and rules. Some MPAs let people fish, do research or other things. **Hence, statement 1 is not correct.**

● **Need for Setting MPAs in Antarctica:**

- ◆ The Southern Ocean around Antarctica has many special animals. The ice and the sea floor are their homes. But the ice is melting because of climate change. People also catch a lot of krill from the sea. Krill are small animals that many big animals eat. A study showed that people catch more krill where the ice is melting. This is bad for the animals and the environment. We need to protect the Southern Ocean with an MPA.
- The Southern Ocean has two MPAs, one in the southern shelf of the **South Orkney Islands** and the other in the **Ross Sea**. These fully protect only 5% of the ocean.
- All types of fishing, other than scientific research, are **prohibited within the southern shelf of the South Orkney Islands MPA**. Discharges and dumping from fishing vessels are also not allowed. **Hence, statement 2 is correct.**



213. Ans: C

Exp:

- **About:**
- Moray Eels occur in all tropical and subtropical seas, they live in shallow water among reefs and rocks. **Hence, statement 1 is correct.**

- ◆ They are known for two types of jaws: one is regular (oral) jaws with big teeth and the second jaw is called **the pharyngeal jaw (which drags prey inside the eels stomach)**.
- Their **IUCN red list status is Least Concern (LC)**. **Hence, statement 2 is correct.**
- ◆ Including the newly discovered species, **29 species of Gymnothorax have been documented in Indian waters so far.**

214. Ans: C

Expl:

- **Maritime India Vision 2030** is a ten-year blueprint for the maritime sector which was released by the Prime Minister at the Maritime India Summit in November 2020. **Hence, statement 1 is correct.**
- It will supersede the Sagarmala initiative and aims to boost waterways, give a fillip to the shipbuilding industry and encourage cruise tourism in India. **Hence, statement 2 is correct.**

215. Ans: C

Expl:

- It is the international body for assessing the science related to climate change. **Hence, statement 1 is correct.**
- It was set up in 1988 by the World Meteorological Organisation (WMO) and United Nations Environment Programme (UNEP) to provide policymakers with regular assessments of the scientific basis of climate change, its impacts and future risks, and options for adaptation and mitigation. **Hence, statement 2 is correct.**
- IPCC assessments provide a scientific basis for governments at all levels to develop climate related policies, and they underlie negotiations at the UN Climate Conference – the United Nations Framework Convention on Climate Change (UNFCCC).