General Knowledge Today

Environment Practice Test: Question 1 to 50

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1. Nitrous oxide is:
    1. also known as laughing gas
    2. colorless & non-flammable gas
    3. one of the pollutants to measure National Air Quality Index
    4. one of the greenhouse gases covered in Kyoto Protocol

    Select the correct option from codes given below:

    [A] 1, 2 & 3

    [B] 2, 3 & 4

    [C] 1, 2 & 4

    [D] 1, 3 & 4

    Answer: [C] 1, 2 & 4

    Nitrogen dioxide is one of the pollutants to measure the National Air Quality Index.
2. What is Goeldichironomus, which was recently in news?

    [A] Insect responsible for damage to Taj Mahal

    [B] Invasive fish species in River Krishna

    [C] First photosynthetic fauna discovered on planet

    [D] Frog species endemic to Western Ghats

    Answer: [A] Insect responsible for damage to Taj Mahal

    First option is the correct answer
3. Consider the following:
    1. Albedo effect
    2. Aerosols in atmosphere
    3. Water vapour

    Which of the above has/have contributed to Global Warming?

    [A] 2 Only

    [B] 1 & 3 Only

    [C] 2 & 3 Only

    [D] 1, 2 & 3

    Answer: [D] 1, 2 & 3

    All three are major contributors to Global Warming.
4. Consider the following statements about Carbon Monoxide (CO):
    1. It is an indoor pollutant
    2. It is more soluble in blood than in water
    3. It is less dense than air

Which of the above statements is/are correct?

[A] 1 Only

[B] 2 & 3 Only

[C] 1, 2 & 3

[D] None

Answer: [C] 1, 2 & 3

All given statements are correct

5. Consider the following devices/technologies:
    1. Venturi scrubber
    2. Electrostatic precipitator
    3. Folkewall

Which of the above is/are used to prevent air pollution?

[A] 1 Only

[B] 1 & 2 Only

[C] 2 Only

[D] 1, 2 & 3

Answer: [B] 1 & 2 Only

Folkewall is used for treatment of polluted water

6. Consider the following statements about Earth Simulator Project:
    1. It has been developed by European space Agency
    2. It aims to study the affect of Global Warming on earth

Which of the above statements is/are correct?

[A] 1 Only

[B] 2 Only

[C] Both 1 & 2

[D] Neither 1 nor 2

Answer: [B] 2 Only

First statement is incorrect because it was developed by Japan Aerospace Exploration Agency.

Second statement is correct

7. Consider the following fauna:
    1. Koala
    2. Yellow-bellied glider
    3. Greater Gliding Possum

Which of the above is/are native to India?

[A] 1 Only

[B] 2 & 3 Only

[C] 1, 2 & 3

[D] None

Answer: [D] None

All above given fauna are native to Australia

8. Consider the following statements about Green SIM Card:
    1. It is an initiative of NABARD
    2. It facilitates farmers to receive voice calls in regional languages

Which of the above statements is/are correct?

[A] 1 Only

[B] 2 Only

[C] Both 1 & 2

[D] Neither 1 nor 2

Answer: [B] 2 Only

First statement is incorrect because it is an initiative from the Green SIM Card has been created under partnership between ICRISAT, mobile phone service provider Airtel, IFFCO (Indian Farmers Fertili ser Cooperative) and Kisan Sanchar Limited (IKSL)

9. Consider the following:
    1. Vermicompost
    2. Azotobacter
    3. Phosphate-solubilising bacteria

Which of the above is/are bio-fertilizer(s)?

[A] 1 Only

[B] 2 & 3 Only

[C] 2 Only

[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

All of above are bio-fertilizers

10. Which of the following statements is/are incorrect?
    1. Energy flow in an ecosystem is Multidirectional
    2. Primary consumers can be carnivores
    3. Seed banks are examples of ex-situ conservation
    4. A food chain always begins with heterotrophic consumer

Select the correct option from codes given below:

[A] 3 Only

[B] 3 & 4 Only

[C] 1, 2 & 4 Only

[D] 1, 2, 3 & 4

Answer: [C] 1, 2 & 4 Only

Third statement is correct. Other three statements are incorrect. A food chain always begins with photosynthetic autotrophs and Energy flow in an ecosystem is unidirectional.Primary consumers are herbivores.

11. Consider the following:
    1. Producers
    2. Decomposers
    3. Consumers

    Which of the above is/are component(s) of food chain?

    [A] 1 Only

    [B] 1 & 3 Only

    [C] 1 & 2 Only

    [D] 1, 2 & 3

    Answer: [D] 1, 2 & 3

    All of the above are components of food chain

12. Consider the following ecosystem types:
    1. Forest ecosystem
    2. Pond ecosystem
    3. Grassland ecosystem

    Which of the above has/have inverted pyramid for biomass?

    [A] 1 Only

    [B] 1 & 2 Only

    [C] 2 Only

    [D] 1, 2 & 3

    Answer: [C] 2 Only

    Grassland ecosystem and Forest ecosystem have upright pyramid for biomass.

13. A rabbit is swallowed by a snake, which in turn by a falcon. Then what is the position of snake in this food chain?

[A] Producer

[B] Primary Consumer

[C] Secondary consumer

[D] Tertiary Consumer

Answer: [C] Secondary consumer

Third option is the correct answer

14. Consider the following natural resources:
    1. Ground water
    2. Forests
    3. Minerals

    Which of the above is/are exhaustible natural resource(s)?

    [A] 2 Only

    [B] 2 & 3 Only

    [C] 1, 2 & 3

    [D] None

    Answer: [C] 1, 2 & 3

    All of the above are exhaustible natural resources

15. As per State of Forests Report 2015, which of the following is the correct order of states for their forest cover area?

    [A] Madhya Pradesh>Chhattisgarh>Arunachal Pradesh>Maharashtra

    [B] Arunachal Pradesh>Madhya Pradesh>Chhattisgarh>Maharashtra

    [C] Madhya Pradesh>Arunachal Pradesh>Chhattisgarh>Maharashtra

    [D] Arunachal Pradesh>Chhattisgarh>Madhya Pradesh>Maharashtra

    Answer: [C] Madhya Pradesh>Arunachal Pradesh>Chhattisgarh>Maharashtra

    Top five states with maximum forest cover (in km²) are as follows:

    Madhya Pradesh (77,462)

    Arunachal Pradesh (67,248)

    Chhattisgarh (55,586)

    Maharashtra (50,628)

    Orissa (50,354)

16. The most important gas which leads to acid rain is sulphur dioxide. Which of the following is the main source for emission of sulphur dioxide?

    [A] Power stations

    [B] Vehicles

[C] Volcanoes

[D] Forest fires

Answer: [A] Power stations

Power stations are the main source for emission of sulphur dioxide.

17. Consider the following:

    1. Water gas
    2. Producer gas
    3. Wood gas

Which of the above has/have carbon monoxide as one of the major component?

[A] 1 Only

[B] 1 & 2 Only

[C] 3 Only

[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

All given gases have carbon monoxide as one of the major component.

18. Consider the following pollutants:

    1. Ground level ozone
    2. Sulphur oxides
    3. Volatile organic compounds

Which of the above is/are primary pollutant(s)?

[A] 1 Only

[B] 2 & 3 Only

[C] 1 & 2 Only

[D] 2 Only

Answer: [B] 2 & 3 Only

Ground level ozone is a secondary pollutant

19. Which of the following is the most abundant pollutant found in smog?

[A] Ozone

[B] Sulphur oxides

[C] Nitrogen oxides

[D] Volatile organic compounds

Answer: [A] Ozone

Ozone is the most abundant pollutant in smog.

20. Which of the following is the main source for emission of Chlorofluorocarbons (CFCs)?

[A] Forest fires

[B] Lightning

[C] Volcanoes

[D] Refrigerators and Air Conditioners

Answer: [D] Refrigerators and Air Conditioners

Refrigerators and air conditioners are the main source for emission of Chlorofluorocarbons (CFCs)

21. Which of the following chemicals is resposible for temporary acid rain in colder regions?

[A] Hydrogen chloride

[B] Sulphur dioxide

[C] Nitric acid

[D] Nitrogen oxides

Answer: [A] Hydrogen chloride

Hydrogen chloride gas released from volcanic eruption is responsible for temporary acid rain in colder regions.

22. Which of the following is the main source for aerosol in upper atmosphere?

[A] Volcanoes

[B] Polar Stratospheric clouds

[C] Jet Planes

[D] Lightning & thunderstorms

Answer: [C] Jet Planes

Jet Planes are the main source for aerosols in upper atmosphere

23. Consider the following:

    1. Methane
    2. Nitrous oxide
    3. Halons

Which of the above is/are responsible for depletion of stratospheric ozone?

[A] 3 Only

[B] 1 & 2 Only

[C] 1 Only

[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

All of the above contribute to depletion of stratospheric ozone. Methane gas is responsiple for damage to stratospheric ozone in Antarctica. Nitrous oxide is responsible for accelerating

the rate of ozone depletion.

24. Consider the following:
    1. Acidic rain
    2. Fog
    3. Snow

    Which of the above is/are type(s) of wet deposition?

    [A] 1 Only

    [B] 1 & 2 Only

    [C] 1, 2 & 3

    [D] None

    Answer: [C] 1, 2 & 3

    Wet deposition refers to acidic rain, fog, and snow.

25. Consider the following statements:
    1. Agriculture is both a source and sink for greenhouse gases
    2. Carbon dioxide is the most potent greenhouse gas

    Which of the above statements is/are correct?

    [A] 1 Only

    [B] 2 Only

    [C] Both 1 & 2

    [D] Neither 1 nor 2

    Answer: [A] 1 Only

    Second statement is incorrect because water vapor is the most potent greenhouse gas.

26. Photochemical smog:

    1. is a type of secondary pollutant

    2. acts as greenhouse gas

    3. contains ozone as an essential component

    Which of the above statements is/are correct?

    [A] 1 Only

    [B] 2 & 3 Only

    [C] 1 & 2 Only

    [D] 1, 2 & 3

    Answer: [D] 1, 2 & 3

    All given statements are correct

27. Consider the following statements:

1. Solubility of gases in water increases with increase in temperature
2. Concentration of ions in seawater is much higher than that in fresh water

Which of the above statements is/are correct?

[A] 1 Only

[B] 2 Only

[C] Both 1 & 2

[D] Neither 1 nor 2

Answer: [B] 2 Only

First statement is incorrect because solubility of gases in water increases with decrease in temperature

28. Consider the following fauna:
    1. Himalayan snowcock
    2. Red fox
    3. Golden eagle

    Which of the above has/have been listed as endangered species in IUCN list?

    [A] 1 Only

    [B] 2 & 3 Only

    [C] 1, 2 & 3

    [D] None

    Answer: [D] None

    Himalayan snowcock→Least concern

    Red fox→least concern

    Golden eagle→least concern

29. Identify the national park with the help of given information:
    1. The park was inscribed to the UNESCO World Heritage Sites list on July 17, 2016
    2. The famous Zemu glacier is located in this park
    3. The vegetation of the park include temperate broadleaf and mixed forests consisting of oaks, fir, birch, maple, willow

    Select the correct answer from options given below:

    [A] Khangchendzonga National Park

    [B] Dachigam National Park

    [C] Dibru-Saikhowa National Park

    [D] Gangotri National Park

Answer: [A] Khangchendzonga National Park

All given statements are related to Khangchendzonga National Park

30. Identify the famous Ramsar site with the help of given information:
    1. The region is an excellent example of glacial erosion
    2. It is located near the Kunzam pass joining the Himalayan and Pir Panjal ranges
    3. The wetland is home to many species like Snow Cock, Chukor, Black Ring Stilt and Blue Sheep

    Select the correct answer from options given below:

    [A] Deepor Beel

    [B] Kanjli Wetland

    [C] Pong Dam Lake

    [D] Chandra Taal

    Answer: [D] Chandra Taal

    All given statements are related to Chandra Taal.

31. Identify the national park with the help of given information:
    1. The park is often referred to as the "abode of perpetual winds" as well as the "land of spirits
    2. It is home to barking deer and the golden cat
    3. It is listed as one of the Elephant corridors in India

    Select the correct answer from options given below:

    [A] Balpakram National Park

    [B] Gugamal National Park

    [C] Hemis National Park

    [D] Kalesar National Park

    Answer: [A] Balpakram National Park

    All above statements are features of Balpakram National Park

32. Mosquito control is a vital public-health practice throughout the world, especially in the tropics to control diseases such as malaria & dengue fever. Which of the following is used as biocontrol to reduce the mosquito population?

    [A] Rohu fish

    [B] Beetles

    [C] Gambusia affinis

    [D] Pelicans

    Answer: [C] Gambusia affinis

Gambusia affinis also known as mosquito fish is used as biocontrol to reduce mosquito population.

33. Consider the following pesticides:
    1. Organ chlorines
    2. DDT
    3. Chlordane

    Which of the above is/are carcinogenic in nature as per World Health Organisation (WHO)?

    [A] 2 Only

    [B] 1 & 2 Only

    [C] 2 & 3 Only

    [D] 1, 2 & 3

    Answer: [D] 1, 2 & 3

    All of the above are carcinogenic in nature

34. Consider the following cycles:
    1. Nitrogen
    2. Water
    3. Carbon cycle

    Which of the above is/are sedimentary cycle(s)?

    [A] 2 Only

    [B] 1 & 3 Only

    [C] 1, 2 & 3

    [D] None

    Answer: [D] None

    All of the above are gaseous cycles. Sedimentary cycles include those of iron, calcium, phosphorus etc.

35. In which of the following cases, the ecological pyramid is never inverted?

    [A] Pyramid of energy

    [B] Pyramid of biomass

    [C] Pyramid of numbers

    [D] Pyramid of species richness

    Answer: [A] Pyramid of energy

    Pyramid of energy is never inverted.

36. The colonization of an area that has not been previously occupied by an ecological community is called:

[A] primary succession

[B] secondary succession

[C] tertiary succession

[D] cyclic succession

Answer: [A] primary succession

The colonization of an area that has not been previously occupied by an ecological community is called primary succession. Examples are: newly exposed rock or sand surfaces, lava flows, newly exposed glacial tills, etc.

37. Consider the following pairs:
    1. Plants of saline water→Halophytes
    2. Plants of acidic soil→Oxylophytes
    3. Plants growing on the sand→Psammophytes

Which of the above is/are correct?

[A] 1 Only

[B] 2 & 3 Only

[C] 2 Only

[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

All given pairs are correct

38. A plant that grows in waters of high salinity is called_?

[A] Halophytes

[B] Oxylophytes

[C] Psammophytes

[D] Chasmophytes

Answer: [A] Halophytes

A plant that grows in waters of high salinity is called halophyte.

39. Taungya farming system:
    1. is used for raising forest plantation
    2. originated in Nepal
    3. reduces the cost of plantation

Which of the above statements is/are correct?

[A] 1 Only

[B] 1 & 3 Only

[C] 2 & 3 Only

[D] 1, 2 & 3

Answer: [B] 1 & 3 Only

Second statement is incorrect because it originated in Burma.

40. Disease known as "Kharra" has been responsible for the decrease in number of which of the following fauna?

[A] House sparrow

[B] Lion tailed macaque

[C] Indian wild ass

[D] Vultures

Answer: [C] Indian wild ass

Disease known as "Kharra" has been responsible for the decrease in number of Indian Wild Ass

41. Consider the following fauna:

1. Pink-headed duck
2. Indian wild ass
3. Indian Vulture

Which of the above is/are classified as “Threatened” species by IUCN?

[A] 3 Only

[B] 1 & 3 Only

[C] 1, 2 & 3

[D] None

Answer: [B] 1 & 3 Only

Indian Wild Ass has been recently categorised by IUCN under 'Near Threatened' category

42. Consider the following:

1. Neuston
2. Plankton
3. Nekton

Which of the above is/are found in lotic ecosystem?

[A] 1 Only

[B] 1 & 3 Only

[C] 2 Only

[D] 1, 2 & 3

Answer: [B] 1 & 3 Only

Plankton are found only in lentic ecosystem. In most *lotic systems*, *phytoplankton* are simply

displaced by the current, and are not able to form standing populations.

43. Consider the following organisms:
    1. Starfish
    2. Oyster
    3. Beetles

    Which of the above is/are classified under “Benthos” biotic community?

    [A] 1 Only

    [B] 1 & 2 Only

    [C] 2 & 3 Only

    [D] 1, 2 & 3

    Answer: [B] 1 & 2 Only

    Beetles are classified under "Neuston" biotic community.

44. Which of the following is the correct food chain?

    [A] Grass→Chamelion→Insect→□□Bird

    [B] Grass→□□Fox→□□Rabbit→Bird

    [C] Phytoplankton→□□Zooplankton→□□Fish

    [D] Fallenleaves→□□Bacteria→□□Insect larvae

    Answer: [C] Phytoplankton→□□Zooplankton→□□Fish

    Third option is the correct answer

45. Consider the following fauna:
    1. Indian flying fox
    2. Indian treeshrew
    3. Lesser mouse-tailed bat

    Which of the above is/are listed under “threatened” species by IUCN?

    [A] 1 Only

    [B] 2 & 3 Only

    [C] 3 Only

    [D] None

    Answer: [D] None

    All given fauna are under least concern category.

46. Which of the following is/are secondary pollutant(s)?
    1. Ozone
    2. Sulphur dioxide
    3. Nitrogen oxides

4. Carbon Monoxide

Select the correct option from codes given below:

[A] 1 Only

[B] 1 & 2 Only

[C] 1, 2 & 3 Only

[D] 1, 2, 3 & 4

Answer: [A] 1 Only

Sulphur dioxide, nitrogen oxides and carbon monoxide are primary pollutants

47. Aerosols are minute particles suspended in the atmosphere, and are known to reduce primary productivity on earth. How they contribute in reducing primary productivity?

[A] By decreasing oxygen concentration

[B] By preventing nitrogen fixation

[C] By decreasing atmospheric albedo

[D] By increasing atmospheric albedo

Answer: [D] By increasing atmospheric albedo

Fourth option is the correct answer. Increase in atmospheric albedo reduces the rate of photosynthesis by plants on earth.

48. Consider the following fauna:

1. Malabar grey hornbill
2. Brown palm civet
3. Kolar leaf-nosed bat

Which of the above is/are endemic to India?

[A] 1 Only

[B] 1 & 2 Only

[C] 1, 2 & 3

[D] None

Answer: [C] 1, 2 & 3

All of the above are endemic to India

49. Identify the fauna with the help of given information:

1. The fauna is locally known as khur
2. The fauna is a subspecies of onager and is native to Southern Asia
3. The only other two sub species of this fauna are found in arid plateau of Tibet
4. It has been recently included under category "Near Threatened" species by IUCN

Select the correct answer from options given below:

[A] Indian wild ass

[B] Great Indian Bustard

[C] Four-horned antelope

[D] Slender-billed vulture

Answer: [A] Indian wild ass

All given statements are related to Indian Wild Ass

50. Which of the following pollutants is the major reason behind adverse affect on the white marbles of Taj Mahal?

[A] Black carbon

[B] Nitrogen oxides

[C] Brown carbon

[D] Sulphur dioxide

Answer: [C] Brown carbon

Correct answer is Brown Carbon, which contributes 30 % in damage to Taj Mahal. As per recent analysis of Centre for Science and Environment (CSE), Sulphur dioxide is not the major contributor to damage now, as it was during 1990s. Vehicle emissions are the biggest contributors for brown and black carbon.

General Knowledge Today

Environment Practice Test: Question 51 to 100

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51. The volcanoes affect the environment by __:

1. Helping the earth to keep cool
2. Producing acid rains
3. Producing vog and laze

Choose the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 2

[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

Volcanoes help keep the earth cool by removing heat from the interior; thus first choice is correct. When volcanic clouds mix with atmospheric moisture, acid rain results; thus second choice is correct. Third choice is also correct. Sulphur dioxide released at the summit or the east rift reacts chemically with oxygen, dust particles, sunlight and water in the air to form a mixture of sulphate aerosols (tiny particles and droplets), sulphuric acid, and other oxidized sulphate species that is known as "**vog**". When lava enters the ocean, another type of chemical reaction takes place between molten lava and seawater. White-plume clouds are generated by intense heat and vigorous chemical reactions. These misty clouds, called "**laze**" contain a mixture of hydrochloric acid and seawater vapour. Laze clouds can drop rainwater on people along the coast. The HCL is toxic and causes irritation to the throat, lungs, eyes, and nose.

52. In context with the green house gases, consider the following statements:

1.GHGs absorb the radiation in the visible range and emit the radiation in thermal infrared range

2.Without GHGs , earth would have been cooler than at present

3.Oceans are sinks of Green Houses Gases

Which among the above is / are correct statements:

[A] Only 1 & 2 are correct statements

[B] Only 2 & 3 are correct statements

[C] 1, 2 & 3 are correct statements

[D] Only 3 is a correct statement

Answer: [B] Only 2 & 3 are correct statements

First statement is incorrect because GHGs absorbs infrared radiation.

53. Which among the following is / are features of an Ecosystem?

1. Its made up of living as well as non-living components
2. It is capable of independent existance
3. It functions as a close system with respect to energy flow
4. The Primary consumers outnumber the producers

Choose the correct option from the codes given below:

[A] Only 1

[B] Only 1 & 2

[C] Only 1, 2 & 3

[D] 1, 2, 3 & 4

Answer: [B] Only 1 & 2

The third statement in this question is incorrect. The Energy enters the biological system as light energy, or photons, is transformed into chemical energy in organic molecules by cellular processes including photosynthesis and respiration, and ultimately is converted to heat energy. This energy is dissipated, meaning it is lost to the system as heat; once it is lost it cannot be recycled. Without the continued input of solar energy, biological systems would quickly shut down. Thus the entire earth is an open system with respect to energy. The same if true for every ecosystem on earth. The transformations of energy in an ecosystem begin first with the input of energy from the sun.

The fourth statement is also incorrect. It depends upon a particular food chain.

54. Identify the artificial ecosystems from the below:

1. Pisciculture tank
2. Agricultural land
3. Zoo
4. Aquarium
5. National Parks

Choose the correct option from the codes given below:

[A] 1, 2, 3 & 4

[B] 3, 4 & 5

[C] 2, 3 & 4

[D] 1, 3 & 4

Answer: [A] 1, 2, 3 & 4

Artificial Ecosystems

An artificial ecosystem is a human made system of plants, animals, and people living in an area together with their surroundings. The pisciculture tank is an artificial ecosystem. A farmland is also an artificial ecosystem. It is simpler, because the farmer gives priority to one type of plant only, fighting against all those animal and vegetal species that might damage it. The energy is supplied by man, through machinery, fertilisers, plant chemicals, selected seeds, farming practices. Then, the biomass (harvest) is removed when ripe. This makes the ecosystem an open system, i.e. one that depends on external sources to reintroduce fertilising substances, fit for feeding a new process of birth and development of organic matter (the plants). A natural ecosystem fertilises itself, instead, since the biomass remains in its original place A house is also a small artificial ecosystem. Items, food, solar energy, water, etc. come from the outside and the solid and liquid waste generated by human activities is disposed of outside. The same applies to the city. It depends on external sources for the supply of food, building materials and other resources it needs to develop, and disposes of its waste outside (dumping grounds and incinerators), that do not contribute, therefore, to the survival of the city as an ecosystem. Zoo parks often create artificial ecosystems by placing animals in human-made areas similar to their natural habitat. People can also create lakes in the middle of desserts and keep penguins in warm climates, but only if they create an artificial ecosystem. Even a spacecraft can contain an artificial ecosystem (like an aquarium), but such ecosystems have almost no value except for exhibition and studying a bit of ecology. National Parks are not artificial ecosystems.

55. What is / are the difference(s) between an Ecosystem and a Biome?

1.An ecosystem comprises biotic as well as abiotic components , while a biome has only biotic components

2.An ecosystem is generally larger part of Biosphere, while a Biome is a smaller part.

Which among the above statements is/ are correct?

[A] Only 1

[B] Only 2

[C] Both 1 & 2

[D] Neither 1 nor 2

Answer: [D] Neither 1 nor 2

Ecosystem versus Biome

Biomes are groups of ecosystems that share similar conditions in an environment. The first thing we have to note that a Biome is a larger part that may comprise many ecosystems. Technically, Biomes are groups of ecosystems that share similar conditions in an environment. A biome is a large area with similar flora, fauna, and microorganisms. Most of

us are familiar with the tropical rainforests, tundra in the arctic regions, and the evergreen trees in the coniferous forests. Each of these large communities contains species that are adapted to its varying conditions of water, temperature, and soil. For instance, polar bears thrive in the arctic while cactus plants have a thick skin to help preserve water in the hot desert. So, the typical characteristics of the Biomes are that they have:

- Similar climatic conditions
- Same kind of abiotic and biotic factors spread over a large area creating a typical ecosystem over that area.

However, please note that a Biome as well as an ecosystem may have many species. In fact, the biomes are divided on the basis of factors such as plant structures (such as trees, shrubs, and grasses), leaf types (such as broadleaf and needle leaf), plant spacing (forest, woodland, savanna), and climate.

56. Which among the following statements correctly differentiate between an Ecozone and a Biome?

1.An Ecozone comprises only land parts of Earth surface, while the Biomes comprise both aquatic and land parts

2.Each Ecozone has some finite number of species , while each biome has infinite number of species

3.Ecozone is a larger ecosystem, biome is a group of ecosystems

Which among the above statements is/ are correct?

[A] Only 1 is correct

[B] Only 1 & 2 are correct

[C] 1, 2 & 3 are correct

[D] Only 1 & 3 are correct

Answer: [A] Only 1 is correct

Ecozones

Ecozones are the Biogeographic division of the Earth's land surface, based on distributional patterns of terrestrial organisms. This means that they include ONLY terrestrial part of the Biosphere and that is why they are alternatively called "Terrestrial Ecozones". Further, Ecozones are defined by genetic, taxonomic, or Geological similarities, rather than the Morphology, plant structures, leaf types, plant spacing or climates. Then, an Ecozone can include a number of different biomes. They both are groups of ecosystems.

57. The Dugong (Sea Cow) is found in India in __:

1.Gulf of Katch

2.Gulf of Mannar

3.Andaman & Nicobar Islands

4.Sundarban Region

Choose the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1, 2 & 3

[D] 1, 2, 3 & 4

Answer: [C] Only 1, 2 & 3

There are no records of Dugongs to be found on the east coast of India or the Sundarban region.

58. In recent times, 'Algae bioreactors' have been of immense attention of scientific research. An Algae bioreactor can be useful for ___:

1. Carbon sequestration

2. Production of biodiesel and bioethanol

3. Pollution Control

Choose the correct option from the codes given below:

[A] Only 1

[B] Only 1 & 3

[C] Only 1 & 2

[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

Algae bioreactors can be useful for carbon sequestration,production of bio-diesel and pollution control

59. Consider the following statements:

1. Algae are primary producers in the aquatic ecosystems

2. Most edible algae are marine algae as most freshwater algae are toxic

Which among the above is / are correct statements?

[A] Only 1

[B] Only 2

[C] Both 1 & 2

[D] Neither 1 nor 2

Answer: [C] Both 1 & 2

Algae are primary producers in aquatic ecosystems and marine organisms. Most of these are edible and have been consumed in different forms since ancient times. Most edible seaweeds are marine algae as most freshwater algae are toxic. While marine algae are not toxic, some do contain acids that irritate the digestion canal, while some others can have a laxative and electrolyte-balancing effect.

60. Ozone disinfection of drinking water is generally preferred than the Chlorination because of the following reasons:

1. Ozone disinfection does not produce harmful side products generally
2. Ozone disinfection leaves no disinfectant residual in the water
3. The taste and odour of water don't get changed by Ozone disinfection

Which among the above reasons is/ are correct?

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

Chloramine disinfection

The use of chloramine is becoming more common as a disinfectant. Although chloramine is not as strong an oxidant, it does provide a longer-lasting residual than free chlorine and it won't form THMs or haloacetic acids. It is possible to convert chlorine to chloramine by adding ammonia to the water after addition of chlorine. The chlorine and ammonia react to form chloramine. Water distribution systems disinfected with chloramines may experience nitrification, as ammonia is a nutrient for bacterial growth, with nitrates being generated as a by-product.

Ozone disinfection

Ozone is an unstable molecule which readily gives up one atom of oxygen providing a powerful oxidizing agent which is toxic to most waterborne organisms. It is a very strong, broad spectrum disinfectant that is widely used in Europe. It is an effective method to inactivate harmful protozoa that form cysts. It also works well against almost all other pathogens. Ozone is made by passing oxygen through ultraviolet light or a "cold" electrical discharge.

To use ozone as a disinfectant, it must be created on-site and added to the water by bubble contact. Some of the advantages of ozone include the production of fewer dangerous by-

products and the absence of taste and odour problems (in comparison to chlorination) . Although fewer by-products are formed by ozonation, it has been discovered that ozone reacts with bromide ions in water to produces concentrations of the suspected carcinogen bromate. Bromide can be found in fresh water supplies in sufficient concentrations to produce (after ozonation) more than 10 ppb of bromate–the maximum contaminant level established by the USEPA. Another advantage of ozone is that it leaves no residual disinfectant in the water. Ozone has been used in drinking water plants since 1906 where the first industrial ozonation plant was built in Nice, France. The U.S. Food and Drug Administration has accepted ozone as being safe; and it is applied as an anti-microbiological agent for the treatment, storage, and processing of foods.

Ultraviolet disinfection

Ultraviolet light (UV) is very effective at inactivating cysts, in low turbidity water. UV light's disinfection effectiveness decreases as turbidity increases, a result of the absorption, scattering, and shadowing caused by the suspended solids. The main disadvantage to the use of UV radiation is that, like ozone treatment, it leaves no residual disinfectant in the water; therefore, it is sometimes necessary to add a residual disinfectant after the primary disinfection process. This is often done through the addition of chloramines, discussed above as a primary disinfectant. When used in this manner, chloramines provide an effective residual disinfectant with very few of the negative aspects of chlorination.

61. Mercury is a very toxic and dangerous substance that has severely contaminated land, water, air and the food chain throughout India. Which among the following is / are sources of mercury pollution?

1. Pesticides
2. Dental amalgam fillings
3. Fluorescent lamps
4. Coal based thermal power plants

Choose the correct option from the codes given below:

[A] Only 1

[B] Only 1 & 2

[C] Only 1, 2 & 3

[D] 1, 2, 3 & 4

Answer: [D] 1, 2, 3 & 4

Emissions from the hundreds of thermal power plants release heavy amounts of mercury — a heavy metal that affects the nervous system in humans. Fluorescent lamps contain mercury and their disposal in the municipal solid waste poses the danger of contaminating the water bodies

62. Which of the following radical is also known as the "atmospheric detergent" ?

[A] Chlorine radical

[B] Hydroxyl radical

[C] Methyl radical

[D] Ozone radical

Answer: [B] Hydroxyl radical

One of the most important chemical components of the troposphere is the 'hydroxyl radical': a highly reactive substance composed of an oxygen and a hydrogen atom, denoted 'OH'. Hydroxyl radicals react with just about any other trace gas they encounter, removing them from the atmosphere.For example, OH combines with toxic carbon monoxide to generate carbon dioxide. In this sense, OH 'cleans up' the troposphere, and is sometimes called the detergent of the atmosphere.

63. Consider the following:

1. Hydrofluorocarbons
2. Hydrochlorofluorocarbons (HCFCs)
3. Ammonia
4. Hydrogen

Which among the above are generally used in the Absorption refrigerators, used in warehouses?

[A] 1, 2 & 3

[B] 2, 3 & 4

[C] 3 & 4

[D] 3 Only

Answer: [C] 3 & 4

Compressor refrigerators typically use an HCFC or HFC, while absorption refrigerators typically use ammonia or Ammonia & Hydrogen.

64. Which among the following is / are warm blooded animals?

1. Mammals
2. Birds

3. Fishes
4. Reptiles

Choose the correct option from the codes given below:

[A] 1 Only

[B] 1 & 2 Only

[C] 1, 2 & 3 Only

[D] 1, 2, 3 & 4

Answer: [B] 1 & 2 Only

With a few exceptions, all mammals and birds are warm-blooded, and all reptiles, insects, arachnids, amphibians and fish are cold-blooded.

65. Consider the following:

1. Nitrous acid
2. Nitric acid
3. Sulfuric acid
4. Hydrochloric acid

Which among the above are common in Acid rains?

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 2, 3 & 4

[D] Only 1, 2 & 3

Answer: [D] Only 1, 2 & 3

Acid rain results from by- products of industry and the internal combustion engine, nitrogen and sulfur. The common acids in acid rain are nitrous acid, nitric acid, and sulfuric acid.

66. Hoolock gibbon:

1. is the only ape found in India
2. is endemic to western ghats
2. uses its songs and whistles to mark and establish territory

Select the correct statements from the codes given below:

[A] Only 1

[B] Only 1 & 2

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [A] Only 1

In the above question, first statement is correct but second and third is incorrect. Hoolock

gibbon is found in north east India and some parts of China, Myanmar etc. Hoolock gibbons use their urine rather to mark and establish territory.

67. Identify the fauna of India with the following information:

1.This animal is widely found in Himalayan Foothills in India, Nepal and Bhutan along with some other countries

2.This animal is considered to be most talented climbers among the cats, it can climb upside down and hang from branches with its hind feet

3.It is smallest of the world's big cats

Choose the correct option from the codes given below:

[A] Snow leopard

[B] Indian leopard

[C] Clouded leopard

[D] Cougar

Answer: [C] Clouded leopard

68. The Kiang and Ghor Khar are common names of the two fascinating wild asses found in India. Consider the following statements with this reference:

1. While Kiang is the Tibetan Wild Ass, Ghor Khar is Indian Wild Ass found in Gujarat

2. Kiang is the largest of the all African and Asiatic wild asses

3. Ghor Khar is one of the fastest of Indian animals

Which among the above statements is / are correct?

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

Kiang: Ladakh *(Equus hemionus kiang)*

The Kiang or Tibetan Wild Ass is the largest of the all African and Asiatic wild asses. Its coat is reddish in summer to dark brown in winter with almost white under parts. Kiang is considered closer to a horse than ass due to its short ears, large tail tuft and broad hooves.

Like all wild asses, Kiangs have short upright mane and a dark stripe along the back extending from nape to tail. The habitat of the Kiang extends from Tibet, some regions in China to east Ladakh and north Sikkim in India. Kiang is 3n agile animal and can run long distances at a speed of more than 50 kms per hour. Kiangs live in herds and feed upon sparsely growing sturdy grasses.

Ghor Khar: Kutch *(Equus hemionus khur):*

The Indian Wild Ass, also called Ghor Khar, is found predominantly in the Little Rann of Kutch and its surrounding areas in Gujarat. Saline deserts (Rann), arid grasslands and shrub lands are its preferred environment. The coat of the animal is usually sandy and may vary from reddish grey, fawn, to pale chestnut. It possesses an erect, dark mane which runs from the back of the head and along the neck followed by a dark brown stripes running along the back, to the root of the tail. It feeds on grass, leaves and fruits of plant, crop and saline vegetation. *It is one of the fastest if Indian animals and can easily outrun a motorized vehicle.*

69. Preservation of biodiversity helps in __:

1.Isolation of unique genetic material so it can be incorporated into existing crops

2.Increasing the chances of discovering organisms with medicinal value

3.Prevention of natural selection

4.Finding new plants that can supplement the world's food supply

Choose the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 1, 2 & 3

[C] Only 1, 2 & 4

[D] 1, 2, 3 & 4

Answer: [C] Only 1, 2 & 4

Third statement is incorrect. Preservation of biodiversity helps in natural selection instead.

70. Which among the following fishes of India are marine fishes?

1.Eel

2.Hilsa

3.Sardina

4.Rohu

Choose the correct option from the codes given below:

[A] 1 & 2

[B] 1, 2 & 3

[C] 2 & 4

[D] 2, 3 & 4

Answer: [B] 1, 2 & 3

Rohu (Labeo rohita) is found commonly in rivers and freshwater lakes in and around South Asia and South-East Asia and is a pure vegetarian fish.

71. All of the zoos, botanic gardens and wildlife parks help in saving the species by __:

1.Providing ex-situ preservation

2.Preserving threatened species from destruction

3.Collecting species from remote wilderness areas.

4.Participating in captive breeding programs

Choose the correct option from the codes given below:

[A] Only 1, 2 & 4

[B] Only 2, 3 & 4

[C] Only 2 & 4

[D] 1, 2, 3 & 4

Answer: [C] Only 2 & 4

72. What is the difference between India's Recorded Forest Area and Forest Cover?

1. While Recorded Forest Area is a legal status, Forest cover is not a legal status

2. While Recorded Forest Area covers all lands more than one hectare in area with a tree canopy density of more than 10%, forest cover barely takes into account the presence of trees on a particular land

Choose the correct option from the codes given below:

[A] Only 1 is correct

[B] Only 2 is correct

[C] Both 1 & 2 are correct

[D] Neither 1 nor 2 is correct

Answer: [A] Only 1 is correct

The term 'Forest Area' (or recorded forest area) refers to all the geographic areas recorded as

'Forests' in government records recorded forest areas largely consist of reserved Forests (RF) and Protected Forests (PF), which have been constituted under the provisions of the Indian Forest Act, 1927. Besides RF and PF, the recorded forest area may also include all such areas which have been recorded as forests in the revenue records or have been constituted so under any State Act or local law. On the other hand, the term 'Forest Cover' as used in the 'SFR' refers to all lands more than one hectare in area with a tree canopy density of more than 10%. Thus 'Forest Area' denotes the legal status of the land, whereas 'Forest Cover' indicates presence of trees on any land irrespective of their ownership. Although majority of the recorded forest areas have vegetation cover, yet there are blanks and areas with tree density less than 10% within it or even areas without any trees. These may include wetlands, rivers, riverbeds, creeks in the mangroves, snow covered areas, glaciers, alpine pastures, cold deserts, grasslands of sholas etc. On the other hand, there are areas outside the recorded forests with tree patches of one hectare and more with canopy density above 10%. Examples include plantations on t he community lands, road side, railways and canals, Eucalyptus, rubber, tea and coffee plantations etc. Such areas also constitute forest cover and are included in the forest cover assessment of FSI.

73. Which among the following statements with respect to the Reserved Forests of India is / are correct?

1.All activities are generally prohibited in Reserved Forests

2.Reserve Forests are established in India under a legislation

Choose the correct option from the codes given below:

[A] Only 1

[B] Only 2

[C] Both 1 & 2

[D] Neither 1 nor 2

Answer: [C] Both 1 & 2

74. Which among the following is / are the Economic services performed by wild species?

1.Nitrogen-fixation

2.Production of medicines

3.Pollination of crops

4.Green washing

Choose the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 2, 3 & 4

[D] Only 1, 2 & 3

Answer: [D] Only 1, 2 & 3

Greenwashing is green marketing, deceptively used to promote the perception that an organization's aims and policies are environmentally friendly. Whether it is to increase profits or gain political support, green-washing may be used to manipulate popular opinion to support otherwise questionable aims.

75. Consider the following statements:

1. Wadden Sea Agreement has been concluded for the protection of Seals
2. Basel Convention in context with environment is related to Hazardous wastes

Which among the above statements is / are correct?

[A] Only 1

[B] Only 2

[C] Both 1 & 2

[D] Neither 1 nor 2

Answer: [C] Both 1 & 2

Agreement on the Conservation of Seals in the Wadden Sea is an agreement between Wadden Sea countries, aimed at protection of seals and concluded in the aegis of Convention on Migratory Species (CMS) in 1990. The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, usually known simply as the Basel Convention, is an international treaty that was designed to reduce the movements of hazardous waste between nations, and specifically to prevent transfer of hazardous waste from developed to less developed countries (LDCs).

It does not, however, address the movement of radioactive waste. The Convention is also intended to minimize the amount and toxicity of wastes generated, to ensure their environmentally sound management as closely as possible to the source of generation, and to assist LDCs in environmentally sound management of the hazardous and other wastes they generate. The Convention was opened for Signature on 22 March 1989, and entered into force on 5 May 1992. Of the 175 parties to the Convention, only Afghanistan, Haiti, and the United States have signed the Convention but not yet ratified it.

76. Which among the following is a manmade Ramsar site?

[A] Ashtamudi Lake, Kerala

[B] Harike Wetland, Punjab

[C] Ropar Wetland, Punjab

[D] Vembanad Lake, Kerala

Answer: [B] Harike Wetland, Punjab

Harike Wetland and the lake were formed by constructing the head works across the Sutlej river, in 1953.

77. With reference to the environment, the Birds are considered to be excellent indicator species. What is / are reasons for this?

1. Birds live in every climate and biome.
2. Birds respond quickly to environmental change
3. Birds are relatively easy to track and count

Choose the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

78. In recent times, the Wildlife and zoo managers have focussed on conserving endangered species such as Nilgiris Tahr, Nilgiris Langur and Lion Tailed Macaques (LTMs), which are on the verge of becoming extinct. What is / are advantages of the Captive Breeding Programme?

1.It eliminated the need to preserve critical habitats.

2.It is comparatively easy for highly mobile species such as migratory birds

3.It can be used to enhance the genetic diversity

Choose the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1

[D] 1, 2 & 3

Answer: [C] Only 1

Captive breeding is the process of breeding animals in human controlled environments with restricted settings, such as wildlife reserves, zoos and other conservation facilities; sometimes the process is construed to include release of individual organisms to the wild, when there is sufficient natural habitat to support new individuals or when the threat to the species in the

wild is lessened.

Captive breeding programs facilitate biodiversity and may save species from extinction. However, such programs may also reduce genetic diversity and species fitness. Captive breeding techniques are usually difficult to implement for highly mobile species like some migratory birds (e.g. cranes) and fishes (e.g. Hilsa).

Species like large cetaceans (whales, dolphins, etc.) may also have some difficulties as it would be hard to meet their biological requirements in captivity, especially the vast amount of space required to keep large populations.

79. To qualify as a Biodiversity Hotspot, an area must contain__:

1.At least 1,500 species of endemic vascular plants

2.At least 70 percent land covered by vascular plants

3.At least 25 threatened species of mammals

4.At least one protected area such as national park

Choose the correct option from the codes given below:

[A] Only 1

[B] Only 1 & 2

[C] Only 1, 2 & 3

[D] 1, 2, 3 & 4

Answer: [A] Only 1

Endemism: it must contain at least 1,500 species of vascular plants (> 0.5 percent of the world's total) as endemics, and loss of Habitat: it has to have lost at least 70 percent of its original habitat.

80. The Bio-Digester bio-toilet:

1. is 100% maintenance free

2. produces inflammable gas containing majority of methane

3. involves decomposition of waste by a consortium of bacteria and fungi

4. works in a limited range of temperatures

Which among the above is / are correct?

[A] Only 1, 2 & 3

[B] Only 1 & 2

[C] Only 2, 3 & 4

[D] 1, 2, 3 & 4

Answer: [B] Only 1 & 2

81. Indiscriminate use of synthetic fertilizers can result in __:

1.Soil contamination by heavy metals

2.Reduction in the nutritional value of crops

3.Reduction in soil fertility

Choose the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

Fertilizers contaminate the soil with impurities, which come from the raw materials used for their manufacture. Mixed fertilizers often contain ammonium nitrate (NH 4N03), phosphorus as P20 5, and potassium as K20. The Arsenic, Lead and Cadmium present in traces in rock phosphate mineral get transferred to super phosphate fertilizer.

Since the metals are not degradable, their accumulation in the soil above their toxic levels due to excessive use of phosphate fertilizers becomes an indestructible poison for crops.

Further, over use of NPK fertilizers reduce quantity of vegetables and crops grown on soil over the years. It also reduces the protein content of wheat. maize. grams. etc., grown on that soil. The carbohydrate quality of such crops also gets degraded. Excess potassium content in soil decreases Vitamin C and carotene content in vegetables and fruits. The vegetables and fruits grown on overfertilized soil are more prone to attacks by insects and disease.

82. There is a Carbon Footprint if a process releases:

1.Carbon dioxide (CO2)

2.Methane (CH4)

3.Nitrous oxide (N2O)

4.Hydro fluorocarbons (HFCs)

Choose the correct option from the codes given below:

[A] Only 1

[B] Only 1 & 2

[C] 1, 2 & 4

[D] 1, 2, 3 & 4

Answer: [D] 1, 2, 3 & 4

Carbon footprint considers all six of the Kyoto Protocol greenhouse gases listed above.

However, to simplify matters- and since $C0_2$ is the most prevalent GHG-these emissions are expressed in terms of C02 equivalent based on a conversion table that uses the Intergovernmental Panel on Climate Change (IPCC) Global Warming Potential (GWP) factors.

83. Which among the following can help in Carbon offsetting?

1.Promotion of Carbon Trading

2.Application of Carbon Sequestration

3.Imposing of Carbon Tax

4.Development of alternative energy sources

Choose the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 1 , 2 & 3

[C] Only 2 & 3

[D] 1, 2, 3 & 4

Answer: [D] 1, 2, 3 & 4

The sole purpose of the Carbon Offsetting is the mitigation of carbon footprints, These can be done via any of the above methods.

84. Which among the following practices can help in Carbon sequestration?

1.Mulching

2.Use of organic manure

3.Zero tillage

4.Contour bunding

Choose the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1, 2 & 3

[D] 1, 2, 3 & 4

Answer: [D] 1, 2, 3 & 4

Mulching, organic manure application, green manure application, reduced or zero tillage, contour bunding, farm ponds, tank silt application, intercropping or multiple cropping, and cover cropping, all of these help in Carbon sequestration.

85. Which among the following have been covered under the National Initiative on Climate Resilient Agriculture?

1.Farm Crops

2.Livestock

3.Fisheries

Choose the correct option from the codes given below:

[A] 1, 2 & 3

[B] Only 1 & 2

[C] Only 1

[D] Only 1 & 3

Answer: [A] 1, 2 & 3

National Initiative on Climate Resilient Agriculture (NICRA) was launched during February 2011 by Indian Council of Agricultural Research (ICAR) with the funding from Ministry of Agriculture, Government of India. Objective of this initiative is to enhance the resilience of Indian agriculture covering crops, livestock and fisheries to climatic variability and climate change through development and application of improved production and risk management technologies.

86. Which among the following is the largest terrestrial pool of carbon?

[A] Ponds and Lakes

[B] Forests

[C] Soil

[D] Rocks and Mountains

Answer: [C] Soil

Soil carbon refers to the carbon held within the soil, mainly as organic content. Soil carbon is the largest terrestrial pool of carbon (2,200 Giga tonnes). Soil carbon plays a key role in the carbon cycle and thus is important in global climate models. It has been shown that l kg of carbon released from the soil constitutes 3.64kg of Co2 in the atmosphere. The exchange of carbon between soils and the atmosphere is a significant part of the world carbon cycle, which is extensive both spatially and temporally. Carbon, as it relates to the organic matter of soils, is a major component of soil and catchment health. With reference to Carbon sequestration, the soil is one of the largest reservoirs, where carbon could be restored.

87. Consider the following statements:

1. Black bucks are found in natural conditions in North India as well as South India.

2. The basic difference between a deer and antelope is the way it sheds and re-grows its Horns

3. Only the male species of the barasingha grow antlers

4. The Barasingha sheds its antlers every year
5. Chinkara is also known as Indian gazelle

Which among the above statements is / are correct?

[A] Only 1 & 2
[B] Only 1, 2 & 3
[C] Only 1, 2, 3 & 4
[D] 1, 2, 3, 4 & 5

Answer: [D] 1, 2, 3, 4 & 5

All are correct statements and notable points.

88. Consider the following statements:

1. Maximum anthropogenic Green House Gas emission takes place by Power Stations
2. Carbon Dioxide has greater heat trapping ability per molecule in comparison to Chlorofluorocarbon

Which among the above statements is / are correct?

[A] Only 1
[B] Only 2

[C] Both 1 & 2
[D] Neither 1 nor 2

Answer: [A] Only 1

First statement is correct. Maximum anthropogenic GHG emission is by Power Stations (over 21%). It is followed by the Industrial Processes (around 17%). Second statement is incorrect.

89. Acid rain is capable of damaging the buildings and historic monuments which are made up of rocks such as limestone and marble. Which among the following is the end product of such reaction?

[A] Quick Lime
[B] Calcium Carbonate
[C] Calcium Hydroxide
[D] Gypsum

Answer: [D] Gypsum

Acid rain is capable of damaging the buildings and historic monuments which are made up of rocks such as limestone and marble. This is because these rocks contain a large amount of Calcium Carbonate, which reacts with the Sulfuric Acid to create Gypsum. Gypsum flakes off easily. This is shown in the following reaction:

CaC03 (s) + H2S04 (aq) – CaS04 (aq) + C02 (g) + H20 (I)

90. Hydrothermal liquefaction is used in to prepare crude like oil from __?

1. Municipal waste
2. Algae
3. Wood

Select the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

Hydrothermal liquefaction is a chemical process used to convert wet biomass (algae, wood, manure) into crude-like oil.

91. Major environmental problem associated with fertilizer use is contamination of water with nitrates, phosphates and potassium. Consider the following statements with this reference:

1. Nitrates easily leach into the groundwater making it dangerous to human health
2. Phosphates are most readily lost from soil because of the high solubility in water
3. Potassium causes problem of Eutrophication

Which among the above statements is / are correct?

[A] Only 1

[B] Only 2 & 3

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [A] Only 1

Nutrients are lost from agricultural fields through runoff, drainage, or attachment to eroded soil particles. The amounts lost depend on the soil type and organic matter content, the climate, slope of the land, and depth to groundwater, as well as on the amount and type of fertilizer and irrigation used. The three major nutrients in fertilizers are nitrogen, phosphorus and potassium. Of these, nitrogen is the most readily lost because of its high solubility in the nitrate form. Leaching of nitrate from agricultural fields can elevate concentrations in underlying groundwater to levels unacceptable for drinking water quality.

The nitrogen from fertilizers and manures are eventually converted by bacteria in the soil to nitrates. These nitrates can be leached into the groundwater or be washed out of the soil

surface into streams and rivers. High nitrate levels in drinking water are considered to be dangerous to human health. Phosphorus cannot be readily washed out of the soil, but is bound to soil particles and moves together with them. Phosphonls can therefore be washed into surface waters together with the soil that is being eroded. The phosphorus is not considered to be dangerous, but it stimulates the excessive growth of algae and t his process is called eutrophication. These algae eventually die and decompose, removing the oxygen from the water which in turn kill the fish. Potassium, the third major nutrient in fertilizers, does not cause water quality problems because it is not hazardous in drinking water and is not a limiting nutrient for growth of aquatic plants. It is tightly held by soil particles and so can be removed from fields by erosion, but generally not by leaching.

92. Consider the following statements:

1. Energy flows through the ecosystem in the form of carbon-carbon bonds
2. All carbon in biological systems ultimately comes from autotrophic plants

Which among the above statements is / are correct?

[A] Only 1

[B] Only 2

[C] Both 1 & 2

[D] Neither 1 nor 2

Answer: [C] Both 1 & 2

On land and in the water, plants take up carbon dioxide and convert it in to carbohydrates through photosynthesis. This carbon in the plants now has three possible fates, [t can be liberated to the atmosphere by the plant through respiration; it can be eaten by an animal, or it can be present in the plant when the plant dies. Animals obtain all their carbon through their food, and, thus, all carbon in biological systems ultimately comes from plants (autotrophs).

In the animal, the carbon also has the same three possible fates. Carbon from plants or animals that is released to the atmosphere through respiration will either be taken up by a plant in photosynthesis or dissolved in the oceans. When an animal or a plant dies, two things can happen to the carbon in it. It can either be respired by decomposers, or it can be buried intact and ultimately form coal, oil, or natural gas. The fossil fuels can be mined and burned in the future; releasing carbon dioxide to the atmosphere. Otherwise, the carbon in limestone or other sediments can only be released to the atmosphere when they are sub ducted and brought to volcanoes, or when they are pushed to the surface and slowly

weathered away. Humans have a great impact on the carbon cycle because when we burn fossil fuels we release excess carbon dioxide into the atmosphere. This means that more carbon dioxide goes into the oceans, and more is present in the atmosphere. The latter condition causes global warming, because the carbon dioxide in the atmosphere allows more energy to reach the Earth from the sun than it allows to escape from the Earth into space. Figure 3.6 illustrates the above processes in the carbon cycle.

93. Consider the following statements:

1. In an aquatic ecosystem zooplankton are primary consumers
2. In a food chain consisting of phytoplankton, zooplankton, fish and fishermen; the fishermen are secondary consumers

Which among the above statements is / are correct?

[A] Only 1
[B] Only 2
[C] Both 1 & 2
[D] Neither 1 nor 2

Answer: [A] Only 1

Phytoplankton are primary producers (are photoautotrophic, creating energy for the food chain). Zooplankton are function as both primary consumers and detrivores, they feed directly on primary consumers such as phytoplankton. Fish are a mixture of secondary and tertiary consumers, secondary would be feeding on primary consumers, and tertiary would be predators that eat primary and secondary consumers. Fisherman are solely tertiary consumers since they are only interested in eating either secondary consumer fish, or at times eating other tertiary consumers.

94. Consider the following:

1. Project Snow Leopard
2. Project Elephant
3. Project Tiger

Which among the above involve 'in situ' measures for conservation?

[A] 1, 2 & 3
[B] Only 2 & 3
[C] Only 3
[D] None of them

Answer: [A] 1, 2 & 3

All these projects are for conservation of these animals in their natural habitats, so all are correct.

95. Which among the following can be used for production of ethanol for the purpose of biofuels?

1. Sugarcane
2. Rice Husk
2. Wheat stalks
3. Wooden chips

Select the correct statement from the codes given below:

[A] Only 1
[B] Only 1 & 2
[C] Only 1, 2 & 3
[D] 1, 2, 3 & 4

Answer: [D] 1, 2, 3 & 4

There are two concepts viz. firs t generation alcohol and second generation alcohol. The first generation is produced from various sources of carbohydrates such as Sugarcane, Potato, Wheat, Rice etc. Second generation is the Lignocellulogic alcohol produced from Cellulose. The sources can be stalks, leaves, bagasse, and husks of rice, wheat, wood chips, sawdust etc.

96. Consider the following statements:

1. Red Panda is naturally found in the western Himalayas
2. Slow Loris lives in the dense forest of the North East
3. Lion-tailed Macaque is naturally found in Western Ghats and Eastern Himalayas

Which among the above statements is / are correct?

[A] Only 1 & 2
[B] Only 2
[C] Only 2 & 3
[D] 1, 2 & 3

Answer: [B] Only 2

The red panda is endemic to the temperate forests of the Himalayas, and ranges from the foothills of western Nepal to China in the east. Its easternmost limit is the Qinling Mountains of the Shaanxi Province in China. Its range includes southern Tibet, Sikkim and Assam in India, Bhutan, the northern mountains of Burma, and in south western China, in the Hengduan Mountains of Sichuan and the Gongshan Mountains in Yunnan.

Slow lorises are found in South and Southeast Asia. Their collective range stretches from Northeast India through Indochina, east to the Sulu Archipelago (the small, southern islands of the Philippines), and south to the island of Java (including Borneo, Sumatra, and many small nearby islands). Third statement is incorrect. Lion-tailed Macaque is naturally found in Western Ghats

97. Consider the following categories of the IUCN Red List of Threatened Species:

1. VU
2. EN
3. CR
4. EW

Which among the following is the correct order of the categories showing increasing threat to the species in these categories ?

[A] 1, 2, 3, 4

[B] 2, 1, 3, 4

[C] 1, 3, 2, 4

[D] 4, 1, 2, 3

Answer: [A] 1, 2, 3, 4

1. Extinct (EX) – No individuals remaining.
2. Extinct in the Wild (EW) – Known only to survive in captivity
3. Critically Endangered (CR) – Extremely high risk of extinction in the wild.
4. Endangered (EN) – High risk of extinction in the wild.
5. S. Vulnerable (VU) – High risk of endangerment in the
6. Near Threatened (NT) – Likely to become endangered in the near future.
7. Least Concern (LC) – Lowest risk.

98. Wildlife (Protection) Act, 1972 provides punishment for the illegal hunting and trade of the wildlife. A tiger which has turned into a man eater can be hunted only if approval comes from ___?

[A] Authorities of the concerned national park / sanctuary

[B] Chief Minister of the state

[C] Environment Ministry, Government of India

[D] Chief wildlife warden of concerned state

Answer: [D] Chief wildlife warden of concerned state

India does not have a robust scientific or policy mechanism to minimise tiger human

conflicts. A Standard Operating Procedure was released by the National Tiger Conservation Authority last year to deal with emergency arising due to straying of tigers to human settlements. The guidelines prohibit killing the tiger unless it has been declared a maneater. Only the chief wildlife warden of a state can permit hunting of man-eaters.

99. The National Parks in India are equivalent to which among the following IUCN Protected Area Management Categories?

[A] IUCN Ia

[B] IUCN Ib

[C] IUCN II

[D] IUCN III

Answer: [C] IUCN II

IUCN protected area management categories classify protected areas according to their management objectives. They are la Strict Nature Reserve, Ib Wilderness Area, II National Park, III Natural Monument or Feature, IV Habitat/ Species Management Area, V Protected Landscape/ Seascape, VI Protected area with sustainable use of natural resources.

100. Consider the following:

1. Kaziranga National Park
2. Manas Wildlife Sanctuary & Tiger Reserve
3. Sundarbans National Park

Which among the above are World Heritage Sites?

[A] Only 2

[B] Only 1 & 2

[C] Only 2 & 3

[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

The Natural properties of India in World Heritage List are: Kaziranga National Park (1985), Keoladeo National Park (1985), Manas Wildlife Sanctuary (1985), Nanda Devi and Valley of Flowers National Parks (1988) and Sundarbans National Park (1987).

General Knowledge Today

Environment Practice Test: Question 101 to 150

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101. The Hyogo Framework for Action was adopted in a United Nations Conference for which among the following for the period of 2005-15?
[A] Green Energy
[B] Climate Changes
[C] Carbon Economy
[D] Natural Disasters
Answer: [D] Natural Disasters

World Conference on Disaster Reduction is a United Nations conference bringing together government officials, non-governmental experts and other specialists from around the world to discuss the growing trend of people affected by natural disasters. The first WCDR conference was held in Kobe, Japan January 10- 22, 2005. The outcome of this conference was Hyogo Framework for Action. The HFA suggests five specific priorities for action:

1. Making disaster risk reduction a priority;
2. Improving risk information and early warning;
3. Building a culture of safety and resilience;
4. Reducing the risks in key sectors;
5. Strengthening preparedness for response.

102. Which among the following elements play important role in Biological Nitrogen Fixation?
1. Iron
2. Molybdenum
3. Phosphorous
Select the correct option from the codes given below:
[A] Only 1
[B] Only 1 & 2
[C] Only 1 & 3
[D] 1, 2 & 3
Answer: [D] 1, 2 & 3

Iron, Molybdenum as well as Phosphorous play important role in BNF. Nitrogen fixation needs an enzyme called nitrogenase. The nitrogenase enzyme has two kinds of proteins viz. Iron Protein, and Iron-Molybdenum protein. Similarly, Leguminous plants that are NZ fixing will usually require more P than similar plants supplied fertilizer N. Nodules are an important P sink, and commonly have the highest concentration of that element in the plant. This is because of the high energy cost of N2 fixation and the cost of building and maintaining

functioning nodules.

103. Every Biosphere in India:

1. works as a living laboratory
2. allows no activities other than research
3. is one of the four types of protected areas in India
4. listed in UNESCO's MAB Framework

Which among the above is / are correct statements?

[A] Only 1

[B] Only 1, 2 & 3

[C] Only 1 & 3

[D] 1, 2, 3 & 4

Answer: [A] Only 1

The first statement is correct. Second statement is not correct as apart from research, limited economic activity (sand and stone mining) is permitted biosphere reserves. Biosphere is not one of the protected areas in India as per legislations. These include National Parks, Wildlife Sanctuaries, Conservation Reserves and Community Reserves.

104. Consider the following differences between the Annex-1 and Annex-2 parties of the Kyoto Protocol?

1. While Annex-I parties are developed nations, Annex-II countries are developing and LDC countries

2 OECD countries are among Annex-I parties, while OPEC countries are in Annex-II parties

Choose the correct option from the codes given below:

[A] Only 1 is correct

[B] Only 2 is correct

[C] Both 1 & 2 are correct

[D] Neither 1 nor 2 is correct

Answer: [D] Neither 1 nor 2 is correct

Annex J Parties

The industrialized countries listed in Annex I to the Convention, which committed to returning their greenhouse-gas emissions to 1990 levels by the year 2000 as per Article 4.2 (a) and (b). They have also accepted emissions targets for the period 2008-12 as per Article 3 and Annex B of the Kyoto Protocol. They include the 24 original DECO members, the European Union, and 14 countries with economies in transition. (Croatia, Liechtenstein, Monaco, and Slovenia joined Annex 1 at COP-3, and the Czech Republic and Slovakia replaced

Czechoslovakia.)

Annex II Parties

The countries listed in Annex II to the Convention which have a special obligation to provide financial resources and facilitate technology transfer to developing countries. Annex II Parties include the 24 original OECD members plus the European Union.

105. Dumping of Iron to the upper ocean can significantly induce the Carbon sequestration in Oceans. This is because introduction of iron to the upper ocean__:

[A] will increase CO2 solubility in Ocean water

[B] will stimulate phytoplankton bloom

[C] will suppress the growth of phytoplankton

[D] will stimulate the growth of fishes and zooplankton

Answer: [B] will stimulate phytoplankton bloom

This question is based upon the concept of Iron fertilization, whereby introduction of iron to the upper ocean to stimulate a phytoplankton bloom is adopted. Like all plants, phytoplankton takes up $C0_2$ from air and converts it to carbon compounds like carbohydrates. The plant quickly dies and starts sinking, taking the carbon with it. What happens thereafter is the key to the technique's efficacy: If it sinks well below the ocean surface, the carbon would effectively have been put away for a long period (Carbon sequestration). This has led to several experiments in recent times.

106. If a species is endemic, it implies that the species is __:

1.Widely distributed but with large gaps between regions

2.Confined to a particular area

3.Confined to ground level and rarely reaches heights above a metre

Which among the above statements is / are correct?

[A] Only 1 & 2

[B] Only 2

[C] Only 2 & 3

[D] 1, 2 & 3

Answer: [B] Only 2

107. The Dugong (Sea Cow) is found in India in __:

1.Gulf of Katch

2.Gulf of Mannar

3.Andaman & Nicobar Islands

Choose the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

Largest Dugong was as long as 13.5 ft and was found in Gulf of Katch in India. In India, they are found in Gulf of Kutch, the only population remaining in western India and Gulf of Mannar. The Gulf of Mannar Biosphere (GoMB) has the largest population of dugongs in India. They are also found near the Andaman and Nicobar Islands.

108. The bamboo and rattan have made a major contribution to many people's livelihoods, their environment, and their businesses around the world. How bamboo is different from rattan?

1. While Bamboo is a tree, Rattan is a climber
2. While Bamboo is typically a hollow cylinder, Rattan is typical solid
3. While Bamboo can grow easily, growing Rattan needs certain special efforts
4. While all parts of Bamboo are of immense use, only stem is useful in Rattan

Choose the correct option from the codes given below:

[A] Only 1, 2 & 3 are correct

[B] Only 2, 3 & 4 are correct

[C] Only 2 & 3 are correct

[D] 1, 2, 3 & 4 are correct

Answer: [B] Only 2, 3 & 4 are correct

Rattan and bamboo belong to disparate botanical families, have different properties, and are propagated and grown in dissimilar ways. Rattan is a palm, normally a climber and solid, while bamboo is a grass, and typically a hollow cylinder. Bamboo grows easily, and very quickly. Cane is a climber, requires a secluded environment, and has long gestation periods. All of the bamboo plant, from root to culm and leaves is utilised in diverse ways. Essentially only the stem of the rattan plant is used.

109. Consider the following matches:

1. Deepor Beel Assam
2. Ghoramara Island Arabian Sea
3. Nilgiri Tahrs Eravikulam National Park

Which among the above is / are correct matches?

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

Ghoramara Island is an island located in the Sundarban delta complex of the Bay o f Bengal. The island is small, roughly five square kilometres in area, and is quickly disappearing due to erosion and sea level rise. Deepor Beel is located in Kamrup district of Assam. It is a permanent freshwater lake, in a former channel of the Brahmaputra river, to the south of the main river. Eravikulam Nationol Park" is famous for Nilgiri Tahrs.

110. Which among the following play role in Global Warming?

1. Water Vapour
2. Laughing Gas
3. Carbon Monoxide
4. Carbon Dioxide

Choose the correct option:

[A] Only 1, 2 & 3

[B] 1, 2, 3 & 4

[C] Only 2 & 4

[D] Only 1 & 4

Answer: [B] 1, 2, 3 & 4

All of them. Nitrous Oxide is laughing gas, rest three are GHG. Please note that as it is, Carbon monoxide (CO) is only a very weak and insignificant greenhouse gas, but has important indirect effects on global warming. Carbon monoxide reacts with hydroxyl (OH) radicals in the atmosphere, reducing their abundance. As OH radicals help to reduce the lifetimes of strong greenhouse gases. like methane, carbon monoxide indirectly increases the global warming potential of these gases. Carbon monoxide in the atmosphere can also lead to the formation of the Ground level Ozone.

111. In present times, the Salt mines are considered to be the safest means for the disposal of the Radioactive Wastes. What could be the possible advantages offered by the salt mines in this context?

1. Salt absorbs the radioactive waves
2. Salt heals its own fractures because of its plastic quality

3. Good quality salt beds are separated from ground water
4. Salt Beds have property of great seismic stability

Choose the correct option from the codes given below:

[A] Only 1, 2 & 3 are correct

[B] Only 2, 3 & 4 are correct

[C] 1, 2, 3 & 4 are correct

[D] Only 1 & 2 are correct

Answer: [B] Only 2, 3 & 4 are correct

The first option given as "Salt absorbs the radioactive waves" is not correct and rest three statements are correct. Most deposits of salt are found in stable geological areas with very little earthquake activity; assuring the stability of a waste repository. Then, the salt deposits demonstrate the absence of flowing fresh water that could move waste to the surface. Water, if it had been or was present, would have dissolved the salt beds. Moreover, Rock salt heals its own fractures because of its plastic quality. That is, salt formations will slowly and progressively move in to fill mined areas and safely seal radioactive waste from the environment. A thick salt deposit will effectively isolate the buried radioactivity from the environment for millions of years.

112. Consider the following:

1. Volatile organic compounds
2. Nitrogen oxides
3. Sulfur oxides

Which of the above can result in the formation of acids in the atmosphere?

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [B] Only 2 & 3

Nitrogen oxides and sulfur oxides can react with water vapor in the atmosphere to form nitric and sulfuric acids, respectively.

113. In which among the following situations, temperature inversion occurs?

1. when warmer air lies above cooler air
2. when cooler air lies above warmer air
3. when warmer air moves in from the south, displacing cooler air

4. when cooler air moves in from the north, displacing warmer air

Select the correct option from the codes given below:

[A] Only 1

[B] Only 1 & 2

[C] Only 1, 2 & 3

[D] 1, 2, 3 & 4

Answer: [A] Only 1

The term temperature inversion describes the vertical layering of air masses, not their horizontal movement.

114. Which of the following is an example of lotic ecosystem ?

[A] Stream ecosystem

[B] Pond ecosystem

[C] Bog ecosystem

[D] Wetland ecosystem

Answer: [A] Stream ecosystem

Lentic - Stagnant water

Lotie - Flowing water

115. Double digging is a method of__:

[A] Bio-intensive agriculture

[B] Deforestation

[C] Aforestation

[D] Water conservation

Answer: [A] Bio-intensive agriculture

Double digging is a gardening technique used to increase soil drainage and aeration. It involves the loosening of two layers of soil, and the addition of organic matter. Double-digging is a key component of the biodynamic method of cultivation.

116. Identify the animal with the information given in statements 1, 2 & 3:

1.This animal is a primate and is generally known as only poisonous primate discovered so far

2.It is nocturnal, insectivorous animal

3.It does not have a tail or has a rudimentary tail

Choose the correct option:

[A] Orangutan

[B] Lemur

[C] Loris

[D] Chimpanzee

Answer: [C] Loris

Loris is the answer. They have very sharp needle-like teeth on their lower jaw, shaped like a spade. Their bite is so painful and agonizing that they can create extreme allergic reactions (up to anaphylactic shock), followed by Hematuria, which is a reaction to the allergen.

Their elbows plays an important part as a lethal weapon, in their defense mechanism. On the inside of the elbows, lies a patch which is used to store a foul smelling toxin. Right before the toxic biting, the loris will suck some poison from the patch and mix it with their saliva, inside their mouth.

117. For the healthy growth of Coral Reefs, the conditions required is / are:

1.Relatively warm tropical oceans with around 20°C temperature

2.Ocean water with plenty of sedimentation

3.Relatively high salinity in Ocean water

Choose the correct option from the codes given below:

[A] Only 1 & 3

[B] Only 1 & 2

[C] Only 1

[D] 1, 2 & 3

Answer: [C] Only 1

Coral reefs are huge deposits made up dead shells and secretions of marine organisms like Corals, Calcarious algae, stomato pteroids, gartopods Mollusca etc. The deposits are mostly made up of Calcium Carbonate.

Conditions required for their growth:

1. Warm tropical oceans located between 30 degree north and 25 degree south latitudes where a minimum temperature of 20 degree is found and this temperature favour the growth of coral organisms.
2. Oceanic water free of sedimentation.
3. Transparent parts of ocean bodies.
4. Relatively low salinity ocean bodies.

118. Which among the following can help to mitigate the impacts of Climate Change on Indian Agriculture?

1. Crop diversification

2. Crop insurance

3. Crop rotation

4. Dryland agriculture

Choose the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3

[C] 1, 2, & 3

[D] 1, 2, 3 & 4

Answer: [D] 1, 2, 3 & 4

Indian agriculture, with two-third rainfed area remains vulnerable to various vagaries of monsoon, besides facing occurrence of drought and flood in many parts of the country. Natural calamities such as drought and flood occur frequently in many parts of the country. Climate change will aggravate these risks and may considerably affect food security through direct and indirect effects on crops, soils, livestock, fisheries, and pests. Building climate resilience, therefore, is critical. Potential adaptation strategies to deal with the adverse impacts of climate change are developing cultivars tolerant to heat, moisture, and salinity stresses; modifying crop management practices; improving water management; adopting new farm practices such as resource-conserving technologies; crop diversification; improving pest management; making available timely weather-based advisories; crop insurance; and harnessing the indigenous technical knowledge of farmers.

The Indian Council of Agricultural Research has initiated a scheme on National Initiative on Climate Resilient Agriculture. This initiative has been planned as a multi-disciplinary, multi-institutional effort covering crops, livestock, and fisheries and focusing mainly on adaptation and mitigation of climate change in agriculture. It also has a component for demonstration of climate-coping technologies on farmers' fields in 100 most vulnerable districts. State-of-the-art infrastructure is being set up at key research institutes to undertake frontier research on climate change adaptation and mitigation.

119. On which among the following, the thickness of the Ozone layer depends in earth's atmosphere?

1.Latitude

2.Seasons

3.Longitudes

Choose the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3
[C] Only 1 & 3
[D] 1, 2 & 3
Answer: [A] Only 1 & 2

The thickness of the ozone layer-that is, the total amount of ozone in a column overhead-varies by a large factor worldwide, being in general smaller near the equator and larger towards the poles. It also varies with season, being in general thicker during the spring and thinner during the autumn in the northern hemisphere. The reasons for this latitude and seasonal dependence are complicated, involving atmospheric circulation patterns as well as solar intensity.

120. For various reasons, the Organic fertilizers are considered better than Chemical Fertilizers. Consider the following statements with this respect:

1.While Chemical fertilizers kill the micro-organisms in the soil, Organic fertilizers boost microbial activity

2.While overuse of Chemical fertilizers is disastrous for soil, overuse of organic fertilizers is somewhat beneficial to soil productivity

3.Organic fertilizers take less time to release the nutrients into soil, in comparison to Chemical fertilizers

Which among the above is / are correct statements?

[A] Only 1 is correct
[B] Only 1 & 2 are correct
[C] Only 1 & 3 are correct
[D] 1, 2 & 3 are correct
Answer: [A] Only 1 is correct

Chemical fertilizers kill the micro-organisms in the soil. It is one of the advantages of organic fertilizers that they boost microbial activity in the soil. These microbes help in degenerating the complex compounds present in the organic fertilizers. Overuse of fertilizers is often a problem as excess nutrients are neither good for the overall composition of soil nor are they good for the plant. Organic fertilizers would also have a problem of overuse, but it is a slow nutrient releasing material, so the nutrients will anyway take some time to get absorbed. The statement mentioned in the question stands incorrect.

Organic fertilizers may take more time to release the nutrients as they need some microbial activity to get them working. Chemical fertilizers get cracking instantly and release the

essential nutrients into the soil. So statement 3 also stands incorrect.

121. The incidence of Eutrophication in rivers and lakes would increase by __:

1.Use of Fertilizers in nearby farms

2.Wastewater effluent

3.Runoff from abandoned mines

Choose the correct option from the codes given below:

[A] Only 1 & 3

[B] Only 1 & 2

[C] Only 2 & 3

[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

Water enriched with nutrients leads to Eutrophication. Decaying organic matter releases odorous gases and partially decomposed matter accumulates on the river or lakebed, hereby limiting water's suitability for human consumption and other uses. High levels of fertilizer use has been associated with increased incidence of Eutrophication in rivers and lakes in several of India's most important water bodies, such as the Hussein Sagar in Hyderabad and Nain ital in Uttar Pradesh (MOWR 2000).

122. Use of composting manure helps in:

1. controlling the soil erosion

2. soil formation

3. water conservation

4. controlling Green House Gas Emissions

Choose the correct option from the codes given below:

[A] Only 1

[B] Only 1 & 2

[C] Only 1, 2 & 3

[D] 1, 2, 3 & 4

Answer: [C] Only 1, 2 & 3

The compost itself is beneficial for the land in many ways, including as a soil conditioner, a fertilizer, addition of vital humus or humic acids, and as a natural pesticide for soil. In ecosystems, compost is useful for erosion control, land and stream reclamation, wetland construction, and as landfill cover (see compost uses). Organic ingredients intended for composting canal ternatively be used to generate biogas through a naerobic digestion.

Anaerobic digestion is fast overtaking composting in some parts of the world including central Europe as a primary means of down cycling waste organic matter.

Advantages

1. 1. Concentrates Nutrients
2. Easier to transport
3. Composting Kills Parasites
4. Usable in organic systems.
5. Usable on land where food is grown for direct human consumption
6. Kills weed seeds
7. No odor when spread
8. Helps in soil formation by creating the humus in the top soil.
9. Soil with organic matter holds not only water, but also the nutrients around plant roots, where they can be used efficiently. Thus it helps in water conservation also.

Disadvantages

1. Loses about half the available nitrogen
2. Releases greenhouse gases

3. Need to have a composting area
4. Need to control rainfall runoff from the compo sting area
5. Difficult to do with liquid manure
6. Some manures might need a carbon source

123. Gene Sanctuaries offer:

1. ex-situ conservation of plant genetic resources
2. cheap method of germplasm conservation
3. way to preserve both the wild species and natural ecosystems

Choose the correct option from the codes given below:

[A] Only 1

[B] Only 1 & 2

[C] Only 3

[D] Only 2 & 3

Answer: [C] Only 3

Conservation of germplasm under natural conditions is referred to as in situ conservation. This is achieved by protecting the area from human interference; such an area is often called Natural Park or gene sanctuary. NBPGR, New Delhi, established gene sanctuaries in Meghalaya for citrus, north Eastern regions for musa, citrus, oryza and saccharum. In this

method of conservation, the wild species and the compete natural or seminatural ecosystems are preserved together. The demerit is that each protected area will cover only very small portion of total diversity of a crop species, hence several areas will have to be conserved for a single species. The management of such areas also poses several problems. This is also a costly method of germplasm conservation.

124. The Biological Diversity Act, 2002 has made provisions for the establishment of the Biodiversity Management Committees. In this context, consider the following statements:

1. A Biodiversity Management Committee is established by the state government by notification

2. One of the major functions of the Biodiversity Management Committee is to promote conservation of the folk varieties and cultivars

3. Biodiversity Management Committee advises the state government on matters of biodiversity conservation on state level

Which among the above statements is / are correct?

[A] Only 1 is correct

[B] Only 1 & 2 are correct

[C] Only 2 is correct

[D] 1, 2 & 3 are correct

Answer: [C] Only 2 is correct

Every local body shall constitute a Biodiversity Management Committee within its area for the purpose of promoting conservation, sustainable use and documentation of biological diversity including preservation of habitats, conservation of land races, folk varieties and cultivars, domesticated stocks and breeds of animals and microorganisms and chronicling of knowledge relating to biological diversity.

For the purposes of this sub section,

1. "cultivar" means a variety of plant that has originated and persisted under cultivation or was specifically bred for the purpose of cultivation
2. "folk variety" means a cultivated variety of plant that was developed, grown and exchanged informally among farmers
3. "landrace" means primitive cultivar that was grown by ancient farmers and their successors.

The National Biodiversity Authority and the State Biodiversity Boards shall consult the Biodiversity Management Committees while taking any decision relating to the use of

biological resources and knowledge associated with such resources occurring within the territorial jurisdiction of the Biodiversity Management Committee.

The Biodiversity Management Committees may levy charges by way of collection fees from any person for accessing or collecting any biological resource for commercial purposes from areas falling within its territorial jurisdiction.

125. Which among the following results in the conservation of the water?

1. Wastewater treatment
2. Wasteland Development
3. Meat export

Choose the correct option from the codes given below:

[A] Only 1

[B] Only 1 & 2

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [B] Only 1 & 2

Wasteland Development itself refers to the development of degraded land into productive land, which can provide bio-mass. It would result in water conservation when it is integrated with water harvesting / protection. A country which exports more food items is likely to consume more water. Thus, meat export will consumer virtual water and that is the reason that vegetarnaiasm is promoted for conservation of water.

126. Which among the following is / are major contributors to GHG emissions?

1. Production of Hydropower
2. Consumption of Inorganic Fertilizers
3. Burning of Coal
4. Rearing of cattle

Select the correct option from the codes given below:

[A] Only 1, 2 & 3

[B] Only 2, 3 & 4

[C] Only 1, 3 & 4

[D] 1, 2, 3 & 4

Answer: [B] Only 2, 3 & 4

Hydropower generation does produces some CO2 but it is most clean energy production and hydroelectricity produces the least amount of greenhouse gases.

127. In context with the green house gases, consider the following statements:

1.GHGs absorb the radiation in the visible range and emit the radiation in thermal infrared range

2.Without GHGs , earth would have been cooler than at present

3.Oceans are sinks of Green Houses Gases

Which among the above is / are correct statements?

[A] Only 1 & 2 are correct statements

[B] Only 2 & 3 are correct statements

[C] 1, 2 & 3 are correct statements

[D] Only 3 is a correct statement

Answer: [B] Only 2 & 3 are correct statements

Greenhouse Gases are gases in the atmosphere that absorb and emit radiation within the thermal infrared range. This process is the fundamental cause of the greenhouse effect. Greenhouse Gases greatly affect the temperature of the Earth; without them, the Earth's surface would be about 33°C (59 °F) colder than at present.

128. A pesticide will generally undergo Bio-amplification in the food chain if __:

1. It is soluble in water

2. It is lipophilic

3. It is not easily degraded

Choose the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [B] Only 2 & 3

Any substance more soluble in tissue than the surrounding media has the tendency to concentrate in the food chain of more complex biological species that live on simpler biological species. So, in a nutshell, bio amplification occurs when concentrations of toxins are passed on from smaller prey to larger predators. There are two main groups of substances that biomagnify. Both are Iipophilic and not easily degraded. Novel organic substances are not easily degraded because organisms lack previous exposure and have thus not evolved specific detoxification and excretion mechanisms, as there has been no selection pressure from them. These substances are consequently known as 'persistent organic pollutants' or

POPs. Metals are not degradable because they are elements. Organisms, particularly those subject to naturally high levels of exposure to metals, have mechanisms to sequester and excrete metals. Problems arise when organisms are exposed to higher concentrations than usual, which they cannot excrete rapidly enough to prevent damage. These metals are transferred in an organic form.

129. With reference to the hazards of the pesticides, how Bio-amplification is different from Bio-concentration?

1.Bio-concentration occurs within an organism, Bio-amplification occurs across food chain

2.Bio-concentration pertains to inorganic substances such as metals, Bio-amplification pertains to organic persistent chemicals

Choose the correct option from the codes given below:

[A] Only 1 is correct

[B] Only 2 is correct

[C] Both 1 & 2 are correct

[D] Neither 1 nor 2 is correct

Answer: [A] Only 1 is correct

Bioaccumulation occurs within a trophic level, and is the increase in concentration of a substance in certain tissues of organisms' bodies due to absorption from food and the environment. Bioconcentration is defined as occurring when uptake from the water is greater than excretion (Landrum and Fisher, 1999) So, Bioconcentration and bioaccumulation occur within an organism, and biomagnification occurs across trophic (food chain) levels, Biodilution is also a process that occurs to all trophic levels in an aquatic environment; it is the opposite of biomagnification, thus a pollutant gets smaller in concentration as it progresses up a food web.

130. The objectives of National Project on Organic Farming include:

1. Financial Support for the production of Biofertilizers

2. Training & Certification on Organic Farming

3. Develop organic standards

Choose the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1& 3

[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

The scheme on 'National Project on Organic Farming' aims at

1. Capacity building through service provider
2. Financial support to production units of bio fertilizers, compost and vermi compost etc.
3. Human resource development through trainings on certification and inspection, production technology etc
4. Field demonstration programmes on organic farming;
5. Development of model organic farms
6. Market development for organic standard:
7. Development of organic standard
8. Support to new initiatives on technology related to organic farming
9. Formulation of regulatory mechanism of organic farming;
10. Creation of awareness about organic farming. Under this scheme, financial assistance is provided for setting up of production units of fruits/vegetable compost units; (ii) bio-fertilizer units & (iii) vermin-culture hatcheries.

131. The Loggerhead, Hawksbill and Leatherback are common names of threatened __:

[A] Turtles

[B] Tortoises

[C] Birds

[D] Mammals

Answer: [A] Turtles

These are common names of the Turtles found in India. Turtles are placed in reptiles. The five species are Green turtle (Chelonia mydas), Loggerhead (Caretta caretta), Olive Ridley (Lepidochelys olivacea), Hawksbill (Eretmochelys imbricata) and Leatherback (Dermochelys coriacea).

132. The objectives of the National Clean Energy Fund' (NCEF) include:

1.To provide funds to states for setting up solar panels

2.To provide funds for research in clean energy field

3.To invest in entrepreneurial ventures related to clean energy

Choose the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 3

[D] 1, 2 & 3

Answer: [B] Only 2 & 3

Idea is to invest in entrepreneurial ventures and research in the field of clean energy technologies. Any project/scheme for innovative methods to adopt to clean energy technology and research & development is eligible for funding under the NCEF. This fund is not used to provide funds to states for setting up solar units.

133. With reference to IUCN (International Union for Conservation of Nature and Natural Resources) , which among the following is a correct statement?

[A] IUCN is known to save endangered species through dramatic, attention-grabbing protests

[B] IUCN is an organization of multinational corporations united to fight conservation efforts

[C] IUCN came up into existence after the Earth Summit of 1992

[D] IUCN is a collaboration of both the governmental agencies and private conservation groups

Answer: [D] IUCN is a collaboration of both the governmental agencies and private conservation groups

134. Which of the following are likely to be present in photochemical smog?

1. Tropospheric ozone
2. Peroxyacetyl nitrates
3. Aldehydes

Select the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

Photochemical smog was first described in the 1950s. It is the chemical reaction of sunlight, nitrogen oxides and volatile organic compounds in the atmosphere, which leaves airborne particles and ground· level ozone. This noxious mixture of air pollutants can include the following:

1. Aldehydes
2. Nitrogen oxides, such as nitrogen dioxide

3. Peroxyacyl nitrates
4. Tropospheric ozone
5. Volatile organic compounds

All of these harsh chemicals are usually highly reactive and oxidizing. Photochemical smog is therefore considered to be a problem of modern industrialization. It is present in all modern cities, but it is more common in cities with sunny. warm, dry climates and a large number of motor vehicles. Because it travels with the wind, it can affect sparsely populated areas as well.

135. Consider the following:

1. Natural wetlands do not have the capacity to clean water
2. Constructed wetlands are engineered marshes that are able to cleanse water

Which among the above statements is / are correct?

[A] Only 1

[B] Only 2

[C] Both 1 & 2

[D] Neither 1 nor 2

Answer: [B] Only 2

Natural wetlands purify water by breaking down and assimilating nutrients, bacteria, and other contaminants. Wetlands can be designed and constructed to take advantage of these naturally occurring processes to treat wastewater from a variety of sources. Please note that Constructed wetlands:

1. provide a cost effective alternative to liquid storage systems
2. help to ensure that water resources are protected from contaminants
3. provide valuable wildlife habitat
4. require very low maintenance and take advantage of processes that occur in nature
5. look natural and add to the appearance of the farm.
6. good for Indian conditions as tropical climate is ideal for the working of the system

136. Consider the following:

1. Thermal power plants
2. Sewage treatment plants
3. Solid waste disposal sites

Which among the above cause thermal pollution of water bodies?

[A] Only 1

[B] Only 1 & 2

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [A] Only 1

Thermal pollution is the degradation of water quality by any process that changes ambient water temperature. A common cause of thermal pollution is the use of water as a coolant by power plants and industrial manufacturers. When water used as a coolant is re turned to the natural environment at a higher temperature, the change in temperature decreases oxygen supply and affects ecosystem composition. Urban runoff-storm water discharged to surface waters from roads and parking lots-can also be a source of elevated water temperatures.

When a power plant first opens or shuts down for repair or other causes, fish and other organisms adapted to particular temperature range can be killed by the abrupt change in water temperature known as "thermal shock."

137. Which among the following can be used as good indicators of heavy metals pollution in marine water?

[A] Sea Weeds

[B] Sea Urchins

[C] Sea Horses

[D] Sea Cows

Answer: [A] Sea Weeds

SEAWEEDS (algae) are good indicators of heavy metal levels in marine environments and could be used for monitoring such pollutants in seas. According to a new study in the Gulf of Kutch, which receives discharges containing heavy metals from several industries, various species of brown, red and green algae accumulate heavy metals from seawater and sediments. Heavy metals enter various organisms and trigger tissue damage.

They generate reactive oxygen species, such as hydrogen peroxide, which break down proteins and lipids, degrade DNA, and cause cell deaths. The study was conducted at Vadinar and Sikka in the Gulf of Kutch. In recent years, such coastal regions have seen rapid industrialisation. The researchers measured the levels of heavy metals in various species of red, brown and green algae, in seawater and sediments and found that iron, manganese and zinc concentrations were generally high in all the algae species. Large amounts of cadmium and zinc were also found. (Down To Earth, Feb 1-14, 2014)

138. Consider the following animals:

1. Snow leopard

2. Barking deer
3. Flying squirrel
4. Red panda

Which among the above is / are found in India in natural habitats / protected areas?

[A] Only 1 & 4
[B] Only 1 & 3
[C] Only 1, 2 & 3
[D] 1, 2, 3 & 4

Answer: [D] 1, 2, 3 & 4

Sikkim state of India is home to wild animals like the snow leopard, Himalayan black bear, Tibetan antelope, barking deer, flying squirrel and the red panda.

139. Consider the following statements:

1. Lion-tailed Macaque is the only Indian macaque with a black coloured coat
2. The great albatross has largest wingspans of any extant birds

Which among the above statements is / are correct?

[A] Only 1

[B] Only 2
[C] Both 1 & 2
[D] Neither 1 nor 2

Answer: [C] Both 1 & 2

Lion-tailed Macaque Macaca silenus is an endangered primate endemic to Western Ghats. Even within the Western Ghats, this animal has a limited distribution. These gregarious monkeys live in troops consisting between 12 and 20 individuals. They almost exclusively live on the canopy of the evergreen forests where they move with at a leisurely pace searching for food. They seldom descend to the ground. Being omnivores, these macaques feed on fruits, leaves, insects and other small animals.

The lion-tailed Macaque is the only Indian macaque with a black coloured coat. It measures 50-60 cm. including head and body with the tail measuring another 30-40 cm. The females are slightly smaller.

A glossy black coat, long, dark grey or brownish grey hairs growing from the temples and cheeks that form a mane are very characteristic of the species. An interesting feature is the short tail that ends in a tassel of hairs, very similar to that of the Lion, earning it the name. Their dark colour, their habit of living in dimly lit forests and their shy nature make spotting

this macaque difficult. However, their occasional call to communicate with members of the troop can give away their presence. Their call resembles the loud cough of a man.

The meat of these macaques is supposed to have medicinal value. Hence, they are hunted for their meat, besides their skin. Poaching and destruction of its evergreen forest habitat are major threats to the survival of this species.

Albatrosses are among the largest of flying birds, and the great albatrosses (genus Diomedea) have the largest wingspans of any extant birds, reaching up to 12 feet (3.7 m).

140. Which among the following comparisons of the African elephant and Asian elephant is / are correct?

1.African Elephants are generally heavier and taller than Asian Elephants

2.African elephants' skin is more wrinkled in comparison to Asian Elephants

3.Female African Elephants has tusks, Female Asian Elephant has either no or rudimentary tusks

Choose the correct option from the codes given below:

[A] Only 1 is correct

[B] Only 1 & 2 are correct

[C] 1, 2 & 3 are correct

[D] Only 2 & 3 are correct

Answer: [C] 1, 2 & 3 are correct

Difference	African elephant (Loxodonta africana)	Asian elephant (Elephas maximus)
		
Weight	4000 – 7000 kg	3000 – 6000 kg
Shoulder height	3 – 4 Meter	2 – 3.5 Meter
Skin	More wrinkled	Smoother
Number of ribs	Up to 21 pairs	Up to 20 pairs
Highest point	On the shoulder	On the back
Size of the ears	Bigger, reach up over the neck	Smaller, do not reach over the neck
Shape of the back	Concave	Convex or straight
Shape of the belly	Diagonally downward in the direction of the hind legs	Either almost straight or sagging in the middle
Shape of the head	Not crumpled from the front to the back, no humped structures, no dent	Crumpled from the front to the back, with humped structures on the top of the head, forehead dented
		
Teeth	Lamella profile of the molars diamond-shaped	Lamella profile of the molars strongly compressed
Tusks	Existing with both sexes. Bigger with the males	Males in many cases having tusks. Females having only rudimentary or no tusks
Lower lip	short and round	long and taper
Food	Mainly leaves	Mainly grass
Trunk	With more rings, less hard	With less rings, harder
Trunk end	With two fingers	With one finger
		
Toenails	Foreleg 4 or rarely 5 Hind leg 3 or rarely 4	Foreleg 5 Hind leg 4 or rarely 5

141. In recent times, the Biotechnology has been widely accepted worldwide for improvement of cultivars with regard to___:

1. Insect pest resistance
2. Tolerance to drought, cold and salinity condition
4. Nutrition enhancement
5. Post harvest quality

Choose the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 1, 2 & 3

[C] Only 2, 3 & 4

[D] 1, 2, 3 & 4

Answer: [D] 1, 2, 3 & 4

Biotechnology is a tool that has been widely accepted worldwide for improvement of cultivars with regard to

1. Insect pest resistance
2. Tolerance to drought, cold and salinity condition
3. Nutrition enhancement
4. Post harvest quality
5. Value addition.

Biotechnological applications should be viewed comprehensively. Both r-DNA and non-r-DNA applications such as fermentation, bio-processing, bio-pesticides, bio-fertilizers, tissue-culture, micro-propagation and related technological components which are important for Indian agriculture including animal husbandry and fisheries should be viewed as integral components of the planning and promotion of biotechnological applications in agriculture,"

142. Consider the following:

1. Porous rocks
2. Glaciers
3. Aquifers

Which among the above store groundwater?

[A] Only 1 & 2

[B] Only 1 & 3

[C] Only 2 & 3

[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

Groundwater is stored in a variety of reservoirs for different amounts of time.

143. Why is thermal pollution a problem for marine organisms?

[A] Marine Organisms are hot-blooded and thermal pollution may overheat them

[B] Marine Organisms live in narrow temperature range and thermal pollution may breakdown their metabolism

[C] Thermal pollution destroys the primary producers of the marine ecosystem and other organisms die because of food scarcity

[D] All of the above are correct explanations

Answer: [B] Marine Organisms live in narrow temperature range and thermal pollution may breakdown their metabolism

Thermal pollution, the release of liquid or gas that increases heat in a surrounding area, has far-reaching and damaging ecological effects by impacting aquatic organisms and animal populations.

Cold-blooded organisms adapted to specific temperature ranges. If water temperatures

change too much, metabolic processes break down. Unlike humans, who can adapt to wide temperature ranges, most organisms live in narrow temperature niches. Unlike humans, who can adapt to wide temperature ranges, most organisms live in narrow temperature niches and their metabolism breaks down at higher temperatures.

144. Carbon dioxide, methane, and nitrous oxide are all___:

1. Green House Gases
2. Produced by Cattle
3. Used in Carbonated Drinks
4. Inorganic Gases

Select the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 1

[C] Only 1, 2 & 4

[D] Only 1 & 4

Answer: [B] Only 1

145. Which among the following endangered mammals of India is / are protected under the Wildlife Protection Act, 1972?

1. Black Buck
2. Chinkara
3. Chiru
4. Indian Wild Ass

Choose the correct option from the codes given below:

[A] 1, 2 & 3

[B] 1, 3 & 4

[C] 1, 2, 3 & 4

[D] 1, 2 & 4

Answer: [C] 1, 2, 3 & 4

Chiru is the common name of Tibetan antelope (Pantolops hodgsonii), and it is a threatened species of Antelopes. To enhance protection of Chiru, its prime habitats have been declared as Wildlife Sanctuaries viz. Karakorma Wildlife Sanctuary and Changthang Cold Desert Wildlife Sanctuary. I just wanted to make you aware that Jammu & Kashmir Government has its own wildlife Protection act of 1978. Chiru is in list I of that act and it is also protected by the Indian wildlife act. Thus it one of the few species which are protected by the two acts.

146. The Bio-digester technology can solve the open defecation problem faced by India and contribute to Swachh Bharat Mission. Which among the following is / are features of Bio-digester developed by DRDO?

1. It requires no drainage system or sewage treatment plant
2. It requires periodic charging with anaerobic bacterial inoculums if it is in regular use
3. It produces green energy

Select the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [C] Only 1 & 3

147. The environmental impacts of the concretization is one of the major issues in urban areas around the world. Which among the following is / are environmental hazard(s) of surface concretization?

1. Increased Carbon dioxide emissions
2. Radioactive Pollution
3. Urban heat island effect
4. Emission of harmful rays

Select the correct option from the codes given below:

[A] Only 1, 3 & 4

[B] Only 2, 3 & 4

[C] Only 1, 2 & 3

[D] 1, 2, 3 & 4

Answer: [D] 1, 2, 3 & 4

Surface concretization is one of the major environmental issues in urban areas around the world. Concretization is not always harmful but depends upon the circumstances. Since cement is major component of concrete; the it contributes a lot in the harmful environmental impacts caused by concrete. Such impacts include:

- Cement Industry is a major contributor for carbon dioxide, a major GHG. It leads to global warming and climate change.
- Concrete causes surface runoff of the water. This might result in soil erosion, water pollution and flooding.

- Concrete is a major contributor of Urban Heat Island because of the massive rise in temperatures since concretized surface gets heated up much faster and also loses heat at night at faster rate.
- Concretized surface emits / radiates harmful Ultraviolet-B rays, which are hazardous to human / animal health. Further, concrete has presence of many substances which might causes toxicity and health problems.
- Concrete can also lead to radioactive pollution because of presence of various natural radioactive elements (K, U and Th) in concrete dwellings. However, it depends on the type of raw material used for the creation of the concrete.
- Excessive concretised surface also causes 'visual pollution' as a concretised surface looks barren in contrast with the aesthetically beautiful green area.
- Concrete dust is a source of air pollution.

However, despite of various impacts listed above, planned use of concrete can help us to have many sustainable benefits. For example, concretization is used in creation of dams, diversion and deflection of flood water; so it is a valuable tool for flood control.

148. The Montreal Protocol was signed to phase out use of CHCs and HCFCs and replace them with HFCs. What advantage(s) is / are offered by HFCs over CHCs and HCFCs? 1. HFCs are ozone friendly in comparison to CHCs and HCFCs 2. HFCs are not proved to posses potential to contribute to global warming Select the correct option from the codes given below:

[A] Only 1

[B] Only 2

[C] Both 1 & 2

[D] Neither 1 nor 2

Answer: [A] Only 1

149. If you travel through western ghats, you are likely to see:

1. Lion-tailed Macaque
2. Markhor
3. Hoolock gibbon

Select the correct option from the codes given below:

[A] Only 1

[B] 1 & 2

[C] 1, 2 & 3

[D] 1 & 3

Answer: [A] Only 1

Lion Tailed Macaque is found only in Western Ghats. Markhor and Hoolock Gibbons are found in Himalayas.

150. The environmental impacts of the concretization is one of the major issues in urban areas around the world. Which among the following is / are environmental hazard(s) of surface concretization?

1. Increased Carbon dioxide emissions
2. Radioactive Pollution
3. Urban heat island effect
4. Emission of harmful rays

Select the correct option from the codes given below:

[A] Only 1, 3 & 4

[B] Only 2, 3 & 4

[C] Only 1, 2 & 3

[D] 1, 2, 3 & 4

Answer: [D] 1, 2, 3 & 4

Surface concretization is one of the major environmental issues in urban areas around the world. Concretization is not always harmful but depends upon the circumstances. Since cement is major component of concrete; the it contributes a lot in the harmful environmental impacts caused by concrete. Such impacts include:

- Cement Industry is a major contributor for carbon dioxide, a major GHG. It leads to global warming and climate change.
- Concrete causes surface runoff of the water. This might result in soil erosion, water pollution and flooding.
- Concrete is a major contributor of Urban Heat Island because of the massive rise in temperatures since concretized surface gets heated up much faster and also loses heat at night at faster rate.
- Concretized surface emits / radiates harmful Ultraviolet-B rays, which are hazardous to human / animal health. Further, concrete has presence of many substances which might causes toxicity and health problems.
- Concrete can also lead to radioactive pollution because of presence of various natural radioactive elements (K, U and Th) in concrete dwellings. However, it depends on the type of raw material used for the creation of the concrete.

- Excessive concretised surface also causes 'visual pollution' as a concretised surface looks barren in contrast with the aesthetically beautiful green area.
- Concrete dust is a source of air pollution.

However, despite of various impacts listed above, planned use of concrete can help us to have many sustainable benefits. For example, concretization is used in creation of dams, diversion and deflection of flood water; so it is a valuable tool for flood control.

General Knowledge Today

Environment Practice Test: Question 151 to 200

Target 2016: Integrated IAS General Studies
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151. Consider the following statements:

1. Wild elephants have been protected under the Schedule 1 of the Wildlife Protection Act of 1972

2. Captive Elephants in India don't come under the purview of Wild Life Protection Act

Which among the above is / are correct statements?

[A] Only 1

[B] Only 2

[C] Both 1 & 2

[D] Neither 1 nor 2

Answer: [A] Only 1

Elephant (Both in wild as well as captive) is an endangered species included in Schedule 1 of the Wildlife Protection Act of 1972. Animals included in Schedule 1 need high level of protection. It provides for the certificate of ownership and makes it mandatory for the elephant owners to provide adequate facilities for the housing, maintenance, and upkeep of captive elephants.

152. Consider the following:

1. Oxides of Carbon

2. Oxides of Sulphur

3. Mercury

4. Radioactive material

Which among the above is / are released in the environment when coal is burnt?

[A] Only 1

[B] Only 1 & 2

[C] Only 1, 2 & 3

[D] 1, 2, 3 & 4

Answer: [D] 1, 2, 3 & 4

All the options are correct in this question. Coal is considered to be the worst environmental pollutant when burnt because of its sulphur content and traces of mercury and radioactive material.

153. How Alligators are different from Crocodiles?

1. While Alligators and Crocodiles belong to same family of reptiles, their orders are different

2. While Alligators prefer a freshwater habitat, crocodiles prefer to live in brackish water or saltwater.

3. While the salt glands are non functional in Alligators, they work in Crocodiles

Select the correct option from the codes given below:

[A] Only 1 is correct

[B] Only 2 & 3 are correct

[C] Only 2 is correct

[D] 1, 2 & 3 are correct

Answer: [B] Only 2 & 3 are correct

Both these reptiles belong to same order Crocodilia, alligators are classified under Alligatoridae family, whereas crocodiles are members of the Crocodylidae family. In regards to the habitat comparison of alligators and crocodiles, both spend their life in and near water bodies and lay their eggs on land. But the difference is alligators prefer a freshwater habitat, while crocodiles prefer to live in brackish water or saltwater. Alligators have a broader 'U' shaped snout, whereas the snout shape of crocodiles is narrow and form a V towards the end.

The tooth placement is also a distinguishing feature to demarcate alligators and crocodiles. The jaw placement of an alligator is such that the upper jaw is wider and covers the lower jaw completely. In case of a crocodile, the width of the upper and lower jaw are the same, hence, the teeth in the lower jaw become apparent after the mouth is closed.Dermal Pressure Receptors (DPRs) are small, black, sensory pits that help in detecting changes in the water pressure. Both in alligators and crocodiles, DPRs serve as an important organ for locating their prey. In alligators, DPRs are present only around the jaw, whereas in crocodiles, these sensory organs are present in nearly every scale of the body.

Both alligators and crocodiles have structurally modified salivary glands (salt glands) in the tongue. The crocodiles use these salt glands for excreting excess salt from the body, whereas in alligators, these salt glands are non functional. This is the reason as to why, a crocodile can tolerate saline water, whereas an alligator cannot. (Buzzle.com)

154. Consider the following endangered fauna of India:

1. Nilgiri Mystus
2. Sociable Lapwing
3. Pygmy hog

Which among the above is / are mammals?

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 3

[D] Only 1 & 3

Answer: [C] Only 3

Nilgiri mystus is a fish endemic to western ghats and is found in Cauvery River and its principal tributaries.

Sociable Lapwing (Vanellus gregarious) is a bird, winter migrant to India. This species has suffered a sudden and rapid population decline due to which it has been listed as critically endangered. Its habitat is Fallow fields and scrub desert. It is found in Kazakhstan, Russia, Kyrgyzstan, Tajikistan, Uzbekistan, Turkmenistan, Afghanistan, Armenia, Georgia, Azerbaijan, Iran, Iraq, Saudi Arabia, Syria, Turkey, Egypt, India, Pakistan and Oman. In India, distribution is restricted to the north and north-west of the country. The current threats to the bird include conversion of habitat to arable land, illegal hunting and proximity to human settlements.

Pygmi Hog is a mammal.

155. Which among the following mammals you will find while visiting the Himalayan region in India?

1. Slow Loris
2. Dhole
3. Red Panda
4. Wild ass

Select the correct option from the codes given below:

[A] Only 1

[B] 1, 2 & 3

[C] Only 2 & 3

[D] 1, 2, 3 & 4

Answer: [D] 1, 2, 3 & 4

Slow loris is a primate found in Eastern Himalayas. Dhole is the Indian wild dog which is found all over India including Eastern Himalayas. Red panda is also a Mammal found in eastern Himalayas and southwestern China. In India, you find Red Panda in Sikkim and Assam. There are two wild asses in India one is Indian wild ass which is found in Rann of Katch. It is also known as Khur. Then we have Kiang or Tibetan wild ass which is found in Ladakh in India.

156. Under the WTO agreements, the subsidies provided for which among the following would amount to Green Box subsidies?

1. Agricultural Research
2. Environment Protection
3. Fertilizers
4. Irrigation

Select the correct option from the codes given below:

[A] 1 & 2

[B] 2 & 3

[C] 3 & 4

[D] 1 & 4

Answer: [A] 1 & 2

Green Box Subsidies include the amounts spent on Government services such as research, disease control, and infrastructure and food security. This also includes the subsidies given to the farmers that directly don't affect production such as for restructuring the agriculture. Since they are permitted in WTO regime, the most developed countries have kept providing subsidies to their farmers. The Green Box contains fixed payments to producers for environmental programs, so long as the payments are "decoupled" from current production levels.

157. Which among the following conventions is/are related to regulation of certain rules for international carriage by air?

1. Montreal Convention
2. Warsaw Convention
3. CMR Convention
4. TIR Convention

Chose the correct answer from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1 & 3

[D] 1, 2, 3 & 4

Answer: [A] Only 1 & 2

There are international laws in existence that provide a world-wide system of standards and rules for air travel and in particular, common rules regarding minimum liability limits for the carriage of passengers, cargo and luggage in the event of death, injury, delay or loss. The first such law introduced is known as the Warsaw convention (1929). In 1999 the Montreal

Convention, titled the Convention for the Unification of Certain Rules for International Carriage by Air amended the Warsaw convention. The convention attempts to re-establish uniformity and predictability of rules relating to the international carriage of passengers, baggage and cargo.

158. Consider the following:

1. Oxides of Sulphur
2. Oxides of Carbon
3. Oxides of Nitrogen
4. Ground Level Ozone

Which among the above have been included in the Air Quality Index (AQI) scheme?

[A] 1, 2 & 3
[B] 2, 3 & 4
[C] 1, 2 & 4
[D] 1, 2, 3 & 4

Answer: [D] 1, 2, 3 & 4

AQI scheme was launched on October 17, 2014 for inviting public comments. AQI scheme comprises of six categories, namely Good, Satisfactory, Moderately polluted, Poor, Very Poor, and Severe with different colour codes. It considers eight pollutants (PM10, PM2.5, NO2, SO2, CO, O3, NH3, and Pb) for which short-term (up to 24-hourly averaging period) National Ambient Air Quality Standards are prescribed. Based on the measured ambient concentrations, corresponding standards and likely health impact, a sub-index is calculated for each of these pollutants. The worst sub-index reflects overall AQI. Information on likely health impacts for these categories is also provided

159. Which of the following is/ are the primary criteria to select a site for Biosphere Reserve in India?

1. Minimum one protected mammal species of indigenous variety
2. Suitability for Research
3. Traditional tribal living

Select the correct option from the codes given below:

[A] Only 1
[B] 1 & 2
[C] Only 2
[D] 1, 2 & 3

Answer: [C] Only 2

The primary criteria for selection of sites for Biosphere Reserves as laid down in the Guidelines issued by the Government are ,a site that must contain an effectively protected and minimally disturbed core area of value of nature conservation and should include additional land and water suitable for research and demonstration of sustainable methods of research and management and the core area should be typical of a biogeographical unit and large enough to sustain viable populations representing all trophic levels in the ecosystem. The secondary criteria are areas having rare and endangered species, areas having diversity of soil and micro-climatic conditions and indigenous varieties of biota and areas potential for preservation of traditional tribal or rural modes of living for harmonious use of environment.

160. Among the various ways to slow down the loss of biodiversity, which among the following would be the most effective?

[A] Freezing fertilized eggs of endangered animals in case the species become extinct in the wild

[B] Setting aside small plots of land in a variety of ecosystems, such as forests, grasslands, and marshes

[C] Creating large parks/preserves in biodiversity hotspots

[D] Requiring every country to maintain a seed bank

Answer: [C] Creating large parks/preserves in biodiversity hotspots

161. The Clouded leopard:

1. is widely found in Western Ghats region in India
2. is smallest of big cats
3. is a talented climber

Which among the above is / are correct?

[A] Only 1

[B] Only 1 & 2

[C] Only 2 & 3

[D] Only 1 & 3

Answer: [C] Only 2 & 3

Clouded Leopard is widely found in Himalayan Foothills in India, Nepal and Bhutan along with some other countries. It is considered to be most talented climbers among the cats, it can climb upside down and hang from branches with its hind feet. It is smallest of the world's big cats

162. Consider the following National Parks of India:

1. Namdhapa National Park, Arunachal Pradesh
2. Hemis National Park, Jammu & Kashmir
3. Desert National Park, Rajasthan

Which among the following is the correct decreasing order of their areas?

[A] 1 2 3

[B] 2 3 1

[C] 3 2 1

[D] 3 1 2

Answer: [C] 3 2 1

Desert National Park, Rajasthan is India's largest national park by India. It is followed by Hemis and Namdhapa.

163. The Stockholm Convention is a globally treat focuses to eliminate ___?

[A] Polyethylene products

[B] Greenhouse Gases

[C] Persistent Organic Pollutants

[D] Chemical Fertilizers

Answer: [C] Persistent Organic Pollutants

164. With reference to the air pollution, the Respirable Suspended Particulate Matter (RSPM) is of two types viz. PM10 (diameter 10-2.5 microns) and PM2.5 (under 2.5 microns). Consider the following statements with this reference:

1. During winter the concentration of PM2.5 is higher than summer
2. While PM2.5 affects the lungs; the PM10 affects the upper respiratory tract

Which among the above is / are correct?

[A] Only 1

[B] Only 2

[C] Both 1 & 2

[D] Neither 1 nor 2

Answer: [C] Both 1 & 2

Pollutants are the made up of soot, dust or smoke particles, which is measured by particular yard stick called as Respirable Suspended Particulate Matter (RSPM). The size of these pollutants is very tiny, which makes it virtually impossible to filter them out, which are less than 10 microns in diameter.

RSPM is generally classified as PM10 (diameter 10-2.5 microns) and PM2.5 (under 2.5 microns).

Source of pollutants:

Source of these pollutants varies from organic to inorganic such as vehicular exhaust and stone-crushing and grinding, dust from construction and paved roads.

Effect of RSPM on our body:

The smaller PM2.5 affects the lungs and the air passage the most. The smaller the particles, the deeper they enter the lungs. Whereas the PM10 affects the upper respiratory tract from the nose and windpipe. Asthma and bronchial diseases are the result of RSPM which can worsens even further. It is most harmful for children, the pregnant women & elderly person. According to International research RSPM affects almost all organs, including the kidneys & brain and also contributes for lung cancer, abnormal foetal development in pregnant women.

165. Which of the followings is/are Ramsar recognised wetland sites in India?

1.Ashtamudi Wetlands

2.Bhitarnika Mangroves

3.Deepor Beel

4.Kolleru lake

Choose the correct answer from the codes given below:

[A] Only 1, 2 & 3

[B] Only 1, 3 & 4

[C] Only 2, 3 & 4

[D] 1, 2, 3 & 4

Answer: [D] 1, 2, 3 & 4

All the above are Ramsar recognised wetland sites.

166. Select species of animals enters into the state of animal dormancy to avoid damage from adverse season. Which among the following are included in such animals?

1. Polar Bear

2. Tortoises

3. Crocodiles

4. Salamanders

Select the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2, & 3

[C] Only 1, 2 & 3

[D] 1, 2, 3 & 4

Answer: [D] 1, 2, 3 & 4

Many animals go under the ground during winter. This process is called hibernation. During this period metabolic rate is reduced. In fact, it is a mechanism of survival. Amphibians like toad and frog undergo hibernation. Hybernation is also seen in female polar bears. Aestivation is an opposite process of hibernation. Some animals go under the ground during the dry season of summer. In zoology it is a state of inactivity and reduced metabolic activity that occurs during the dry season in species such as lungfish and snails.

167. The International Union for Conservation of Nature (IUCN) declares some places around the world as "Hope Spots". Hope Spots are the places which are critical to the health of the __:

[A] Ocean life

[B] Groundwater

[C] Wetlands with plenty of Migratory Birds

[D] Tropical Rainforests

Answer: [A] Ocean life

A Hope Spot is an area of ocean that merits special protection because of its wildlife and significant underwater habitats.

168. Various functions of the National Biodiversity Authority include:

1. To declare biological diversity heritage sites
2. To regulate access to biological resources
3. Protection and rehabilitation of threatened species
4. To environmental release of Genetically Modified Organisms (GMOs)

Select the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 1, 2 & 3

[C] Only 2, 3 & 4

[D] 1, 2, 3 & 4

Answer: [B] Only 1, 2 & 3

National Biodiversity Authority

At the national level, National Biodiversity Authority (NBA) was established by the Government of India in October, 2013 at Chennai (Tamil Nadu) under Section (8) of the Biological Diversity Act. The State Biodiversity Boards (SBB) are to be established by the State Governments and Biodiversity Management Committees (BMCs) to be constituted by the local bodies. NBA is an autonomous, statutory and regulatory organization which is intended to implement the provisions of Biological Diversity Act, 2002.

The main objectives of NBA are:

- To regulate access to biological resources of the country to conserve and sustainable use of biological diversity.
- To respect and protect the knowledge of local communities related to biodiversity.
- To secure sharing of benefits with the local people as conservers of biological resources and holders of knowledge and information relating to the use of biological resources.
- Conservation and development of area of importance from the view point of biological diversity by declaring them as biological diversity heritage sites.
- Protection and rehabilitation of threatened species, involvement of institutions of state government in the broad scheme of implementation of the Biological Diversity Act through constitution of committees.

Genetic Engineering Appraisal Committee (GEAC)

The Ministry of Environment, Forests & Climate Change (MoEFCC), under the Environment (Protection) Act, 1986 has notified the "Rules for the Manufacture, Use, Import, Export and Storage of Hazardous Microorganisms/Genetically Engineered Organisms or Cells, 1989" (Rules, 1989). The rules also cover application of hazardous microorganisms which may not be genetically modified. Hazardous microorganisms include those which are pathogenic to animals as well as plants. The Genetic Engineering Appraisal Committee (GEAC), the apex body under the Rules, 1989 has the mandate to approve large scale trials and environmental release of Genetically Modified Organisms (GMOs) and ensure that research, development and testing of GMOs prior to environment release are conducted in a safe and scientific manner through appropriate implementation of Rule 1989 and biosafety guidelines.

169. In recent times, lots of attention is being given to the protection of mangroves. What benefits mangroves offer?

1. They provide wood, non-wood as well as fishery resources
2. They provide abundant scope for water sports such as rowing, kayaking, canoeing etc.
3. Some mangrove plants are useful in Medicinal purposes

Select the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1

[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

This question is based on a report published in June 2015 edition of Science Reporter about the Pichavaram of Tamil Nadu. The following text comes from that report:

The mangrove forest of Pichavaram is located 250 km south of Chennai. A unique eco-tourism spot in south India, the Pichavaram mangrove provides abundant scope for water sports such as rowing, kayaking, canoeing etc.

The mangrove covers an area of about 1400 hectares. The availability of different habitat types such as channels, creeks, gullies, mud flats and adjacent sea shore offers an ideal habitat for different species of plants, birds, animals of rare varieties of economically important shell and fin fishes.

The Pichavaram mangrove is a pristine reserve of rich flora and fauna and is considered among the healthiest mangroves in the world. There are as many as 14 species of exclusive mangrove species, besides 24 species of trees, 21 shrubs, 28 herbs, 82 species of phytoplankton including 70 species of diatoms, 22 species of seaweeds, 20 species of blue-green algae and 3 species of sea grasses growing in this region.

Almost 17 hamlets of 5 revenue villages are benefitted from these mangroves utilizing the wood, non wood and fishery resources. The farming communities cultivate paddy and ground nut as major crops and in elevated land Casuarina cultivation is done. The people also depend on the mangrove for medicinal purposes, for example, Excoecaria agallocha (Thillai) for latex for toothache, Acanthus ilicifolius fruits for dressing snake bite, and Salicornia brachiata plant ash for treating itches.

Rich fishery resource of 237 tons is harvested every year from the Pichavaram mangrove wetlands of which prawn alone constitutes 208 tons, whereas fish and crab constitute 19 and 9 tons respectively. There are also animals like sea otter, water snake, foxes, water dogs, turtles, and water fowl. Pichavaram is also a sanctuary for 176 species of birds including herons, storks, sea eagles, egrets, kingfishes, sand-pipers, etc.

Communities living close to and interacting with the Pichavaram mangrove wetlands have gained their unique cognitive understanding of the ecosystem from the resource utilization pattern. Experiences have led to a rich knowledge system that is reflected in the native classification of mangrove wetlands. Local communities have developed their own traditional system of management to ensure sustainable harvest of mangrove resources and equitable sharing of harvested products.

However, the socio-economic life of the fisher folk is currently suffering due to reduction of fishery resources due to sandbar formation near the river mouth resisting free flow of tidal waters to the mangrove. Dredging of the river mouth region and afforestation of denuded areas can easily solve this problem.

170. Which among the following measures in farming can help to reduce emission of Green House Gases?

1. No till cropping
2. Improving pasture quality
3. Draining water from wetland rice soils during the growing season
4. Storing organic manure in open pits in liquid state

Select the correct option from the codes given below:

[A] Only 1 & 3
[B] Only 2 & 3
[C] Only 1, 2 & 3
[D] 1, 2, 3 & 4

Answer: [C] Only 1, 2 & 3

When we store manure in open pits in liquid state, it would tend to release methane, which would aggravate the global warming. The first three choices given are correct and last one is incorrect.

171. With reference to the Environment Protection, which among the following is / are legally binding conventions?

1. United Nations Framework Convention on Climate Change
2. Asia-Pacific Partnership on Clean Development and Climate
3. Vienna Convention for the Protection of the Ozone Layer
4. United Nations Convention to Combat Desertification

Select the correct option from the codes given below:

[A] 1, 2 & 3
[B] 1, 3 & 4
[C] 1, 2 & 4
[D] 4

Answer: [D] 4

172. In comparison to Land exploration, the Offshore oil & gas exploration is __:

1. Environmentally friendly

2. Cheaper
3. Easier

Select the correct option from the codes given below:

[A] Only 1
[B] Only 2
[C] Only 2 & 3
[D] None of them

Answer: [D] None of them

Offshore drilling to produce hydrocarbons has become popular because Land oil has already been exploited in most places. Offshore oil and gas production is more challenging than land-based installations due to the remote and harsher environment. Much of the innovation in the offshore petroleum sector concerns overcoming these challenges, including the need to provide very large production facilities.

173. The government categorizes the industries into three categories viz. Red, Orange and Green in terms of the pollution criteria. Which among the following come under the Orange category?

1. Food processing
2. Pulp and Paper Industry
3. Stone Crushers

Select the correct option from the codes given below:

[A] Only 1 & 2
[B] Only 2 & 3
[C] Only 1 & 3
[D] 1, 2 & 3

Answer: [C] Only 1 & 3

Industries have been classified under three categories on the basis of pollutants produced. The categories are: Red, Orange and Green.

174. Which of the following is / are characteristic feature of biodiversity hotspots?

1. Large number of species
2. Abundance of endemic species
3. Large number of exotic species
4. Destruction of habitat

Select the correct option from the codes given below:

[A] Only 1, 2 & 3

[B] Only 2, 3 & 4

[C] Only 1, 2 & 4

[D] 1, 2, 3 & 4

Answer: [C] Only 1, 2 & 4

Presence of large number of exotic species is not a feature of biodiversity hotspots.

175. Which among the following is / are key feature(s) of Social Forestry in India?

1. Management of forests by co-operative societies
2. Growing and management of useful plants on underutilized land
3. Public Private Participation by involvement of corporate

Select the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2

[C] Only 2 & 3

[D] 1, 2 & 3

Answer: [B] Only 2

It's all about participation of the common people rather.

176. Which among the following an animals have been declared extinct in wild in India:

1. Cheetah
2. Pink-Headed Duck
3. Sumatran Rhinoceros
4. Gee's Golden Langur

Select the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 1, 2 & 3

[C] Only 1 & 3

[D] 1, 2, 3 & 4

Answer: [B] Only 1, 2 & 3

177. Consider the following pairs:

1. Asiatic Lion→Gir National Park
2. Rhinoceros→Kaziranga National Park
3. Hangul→ Corbett National Park
4. Lion tailed Macaque→Western Ghats

Which among the above is / are correct matches?

[A] Only 1 & 2

[B] Only 1, 2 & 3

[C] Only 1, 2 & 4

[D] 1, 2, 3 & 4

Answer: [C] Only 1, 2 & 4

Hangul → Dachigam National Park

178. Apart from green house effect, which among the following contribute in global warming?

1. Depletion of ozone in stratosphere
2. Deforestation
3. Certain waste management and agricultural practices
4. Nuclear Testing

Select the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 2, 3 & 4

[D] 1, 2, 3 & 4

Answer: [B] Only 2 & 3

We need to note that the ozone hole is not the mechanism of global warming. Ultraviolet radiation represents less than one percent of the energy from the sun—not enough to be the cause of the excess heat from human activities. Similarly, the total impact of all the nuclear tests done so far is minuscule and that too is a net cooling factor rather.

179. The enrichment of water bodies with excess of which of the following leads to Eutrophication?

1. Phosphates
2. Nitrates
3. Halides

Select the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [A] Only 1 & 2

180. Which among the following sets of fauna represents same taxonomical order?

[A] Whales, Dolphins, Porpoises

[B] Dolphins, Porpoises, Dugong

[C] Whale, Dugong, Porpoises

[D] Dolphins, Dugong, Manatees

Answer: [A] Whales, Dolphins, Porpoises

Marine mammals are a diverse group of animals. They include cetaceans (whales, dolphins, and porpoises), sirenians (manatees and dugong), pinnipeds (true seals, eared seals and walrus), a few otters (the sea otter and marine otter) and the polar bear (usually grouped with the marine mammals).

181. Consider the following statements:

1. Sperm Whale, Blue whale and Sea Cow are found in marine waters of India
2. There are no marine mammals endemic to India

Which among the above is / are correct statements?

[A] Only 1

[B] Only 2

[C] Both 1 & 2

[D] Neither 1 nor 2

Answer: [C] Both 1 & 2

Reference

182. Consider the following fauna:

1. Nilgiri Langur
2. Asiatic Lion
3. Namdhapa Flying Squirrel

Which among the above is / are endemic to India?

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [C] Only 1 & 3

Asiatic Lion (Panthera leo persica) is although found only in Gir Forest yet, it is not classified as endemic to India.

183. In recent times, it has been postulated that Indian deltas including Ganga-Brahmaputra, Krishna-Godavari, Brahmani and Mahanadi are facing threat of submergence. Which among the following can pose threats to deltas?

1. Large dams

2. Groundwater mining
3. Artificial levees that affect river courses

Select the correct option from the codes given below:

[A] Only 1 & 2
[B] Only 2 & 3
[C] Only 1 & 3
[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

184. A large part of global greenhouse gas emissions are attributed to the methane gas production in farming and livestock management. Which among the following practices in agriculture lead to methane emission?

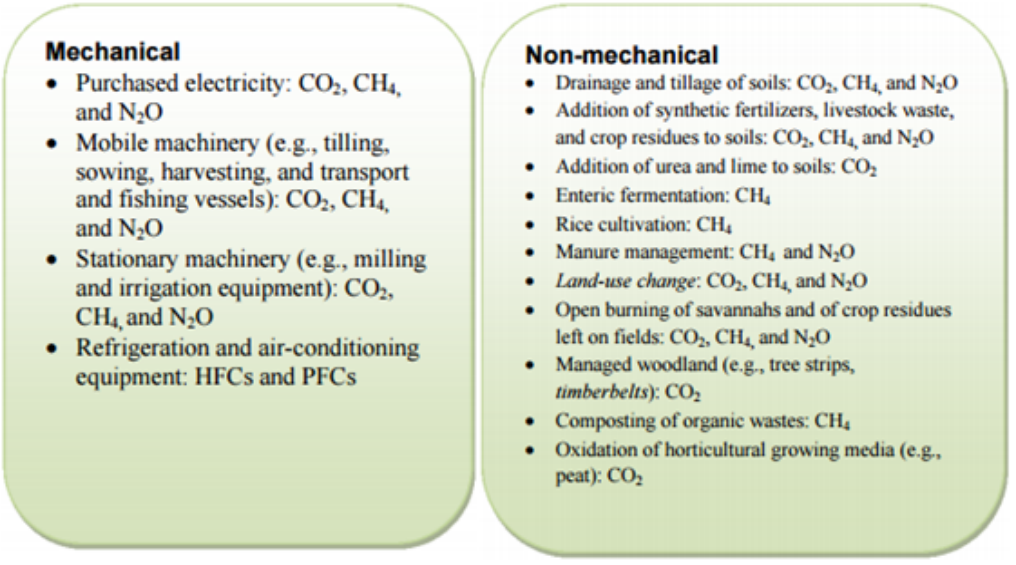
1. Composting of organic waste
2. Open burning of crop residues on fields
3. Addition of Urea and Lime in soil
4. Rice / Paddy cultivation

Select the correct option from the codes given below:

[A] Only 1, 2 & 3
[B] Only 2, 3 & 4
[C] Only 1, 2 & 4
[D] 1, 2, 3 & 4

Answer: [C] Only 1, 2 & 4

Figure 4-1. Agricultural emissions sources



Source

185. Reduced tillage practices are helpful for soil health in many ways. Consider the following statements with this context:

1. Reduced tillage helps to improve the soil food web and biodiversity
2. Reduced tillage brings down the requirement of herbicides
3. Reduced tillage helps in mitigation of GHG emissions

Which among the above is / are correct statements?

[A] Only 1 & 2

[B] Only 1 & 3

[C] Only 2 & 3

[D] 1, 2 & 3

Answer: [B] Only 1 & 3

Tillage is an important factor that decreases soil quality. Reduced tillage practices could increase Soil Organic Matter and moisture content of the soil, and also improve the soil food web. However, there is a great disadvantage in reduced tillage that it requires a greater use of herbicides due to the increased spread of weeds and soil pathogens. If this is not taken into account, it may affect the crop yields due to the increased prevalence of pathogens, pests, diseases and weeds. Reduced tillage often leads to retention of soil residues and reduction in the emission of carbon dioxide to the atmosphere. This can sustain the soil biota in a healthy

state and also maintains the physical and chemical properties of the soil.

186. With reference to soil, consider the following terms and their meanings:

1. Biostimulation→addition of nutrients to soil to stimulate the growth of indigenous microflora
2. Bioventing→addition of gases such as oxygen or methane to stimulate activity of microflora
3. Bioaugmentation→inoculation of soil with exogenous microorganisms
4. Soil sealing→mixing toxic soil with healthy soil

Which among the above is / are correct?

[A] Only 1 & 2

[B] Only 1, 2 & 3

[C] Only 2, 3 & 4

[D] 1, 2, 3 & 4

Answer: [B] Only 1, 2 & 3

Chemicals present in the soil may be those that are purposefully applied to the soil such as pesticides and fertilizers or those that make an accidental entrance to the soil. Microorganisms present in the soil may use the pollutant as a source of energy for their metabolism or would make it less harmful by changing its composition.

But when certain microorganisms are employed exclusively for this purpose, it is called bioremediation.

It can be enhanced through the addition of nutrients to soil to stimulate the growth of indigenous microflora (biostimulation), addition of gases such as oxygen or methane to stimulate activity of microflora (bioventing), inoculation of soil with exogenous microorganisms (bioaugmentation), mixing toxic soil with healthy soil (landfarming) and use of plants (phytoremediation). Let's play our part to raise awareness about the importance of healthy soils. In the coming future, healthy soils will have to sustain food production to meet the needs of the increasing population Soil sealing Soil sealing occurs through the destruction or covering of soil by buildings, or types of artificial material which may be very slowly permeable to water (e.g. asphalt or concrete). Soil sealing can cause rapid overland flow after precipitation where water cannot soak away leading to potential flooding.

187. In recent times, the use of Rice Bran Oil or Bran oil has increased a lot in cooking in several parts of the world, including India. What makes this oil so popular?

1. It has relatively higher proportion of PUFA (polyunsaturated fats) in comparison to MUFA (monounsaturated fats) or SUFA (saturated fatty acids)

2. It cooks the food at relatively lower temperature saving the fuel

3. It contains relatively high levels of natural antioxidants

Select the correct option from the codes given below:

[A] Only 1

[B] Only 1 & 2

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [C] Only 1 & 3

It cooks the food at relatively Higher temperature thus suitable for flash frying.

188. A waste-to-energy system captures greenhouse gases from hog waste and burns them to run a turbine, producing electricity. Which among the following is / are consequences of such project?

1. It can help to reduce Global Warming

2. It creates carbon offset credits

3. It creates a Low Carbon Economy

4. It results in Carbon sequestration

Select the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1, 2 & 3

[D] 1, 2, 3 & 4

Answer: [D] 1, 2, 3 & 4

189. Consider the following:

1. Soot

2. Chlorofluorocarbons

3. Fly Ash

4. Sulphates and Nitrates

Which among the above is / are main constituents of atmospheric brown cloud?

[A] Only 1, 2 & 3

[B] Only 1, 3 & 4

[C] Only 1 & 4

[D] Only 4

Answer: [B] Only 1, 3 & 4

Black carbon, fly ash, soil dust particles, and nitrogen dioxide gas, sulphuric compounds are

main constituents of atmospheric brown cloud.

190. Consider the following statements:

1. One molecule of chlorofluorocarbons (CFCs) has the same greenhouse effect as have 10,000 molecules of carbon dioxide

2. Methane has 1000 times green house gas effect as compared to CO2

Which among the above is / are correct statements?

[A] Only 1

[B] Only 2

[C] Both 1 & 2

[D] Neither 1 nor 2

Answer: [A] Only 1

191. In recent times, the Brown clouds have been a cause of concern with respect to the climate change. What makes us so concerned about them?

1. Brown clouds absorb sunlight and accelerate the Green House Effect

2. Brown clouds suppress the rains and can change rainfall pattern

3. They are directly affecting the Himalayan Glaciers as well as arctic

Select the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

The atmospheric blanket traps the heat, but there are also other particles involved in the blanket such as sulphates and nitrates in the atmospheric brown clouds, which function as mirrors. The “mirrors” (sulphates, nitrates, etc) in the atmospheric brown clouds mixes with atmospheric water and form acid rain

192. Which among the following agricultural practices can increase soil carbon sequestration?

1. Mixed cropping

2. Conservation tillage such as no till

3. Rotational livestock grazing

Select the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

193. Some studies have suggested that impacts of Green House Gases and Aerosols tend to be in opposite direction. Consider the following statements in this context:

1. While Green House Gases tend to reduce the precipitation, Aerosols tend to increase the precipitation

2. While greenhouse gases tend to persist and thereby accumulate in the atmosphere, aerosols are generally short-lived

Which among the above is / are correct statements?

[A] Only 1

[B] Only 2

[C] Both 1 & 2

[D] Neither 1 nor 2

Answer: [B] Only 2

194. Fly-ash, which was once discarded as a waste, is gradually emerging as a major input material in recent times. Apart from construction, cement and agriculture, what are other potential applications of Fly Ash?

1. Fly ash can help transform barren wasteland into lush green forests

2. Pigments extracted from Fly Ash can be very useful in manufacturing of paints

Which among the above is / are correct?

[A] Only 1

[B] Only 2

[C] Both 1 & 2

[D] Neither 1 nor 2

Answer: [C] Both 1 & 2

Fly Ash can be effectively used:

1. Cement Industry
2. Bricks Industry
3. Paints & construction industry
4. Agriculture & nursery

Fly Ash is added as a mixture to cement for building construction, laying of roads and landfills. The bricks and blocks made of fly-ash are stronger and cheaper than conventional bricks

195. As compared to Photosynthesis, the Chemosynthesis involves CO2 fixation using energy derived from __:

[A] Oxidation of inorganic molecules

[B] Sunlight

[C] Ultraviolet radiation

[D] Infra Red radiation

Answer: [A] Oxidation of inorganic molecules

Some organisms are able to convert inorganic material into organic compounds by a process called Chemosynthesis. This involves oxidation of inorganic molecules (e.g. hydrogen gas, hydrogen sulfide) or methane as a source of energy, rather than sunlight, as in photosynthesis.

196. Which among the following is / are principal components of photochemical smog in urban areas?

1. Oxides of Nitrogen
2. Hydrocarbons
3. Ozone

4. Suspended Particulate Matter

Select the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 1, 2 & 3

[C] Only 2, 3 & 4

[D] 1, 2, 3 & 4

Answer: [D] 1, 2, 3 & 4

All are principal components of photochemical smog.

197. Once a lion has finished its meal, a vulture swoops down and finishes off the carcass. Which among the following term most appropriately denotes the relation between lion and vulture?

[A] Mutualism

[B] Symbiosis

[C] Commensalism

[D] Antibiosis

Answer: [C] Commensalism

Many orchids use trees as a surface to grow. In ecology, commensalism is a class of relationships between two organisms where one organism benefits from the other without affecting it. This is in contrast with mutualism, in which both organisms benefit from each

other, amensalism, where one is harmed while the other is unaffected, and parasitism, where one benefits while the other is harmed.

198. Which of the following are endangered bird species of India:

1. Narcondam hornbill
2. Himalayan quail
3. Nicobar flying fox
4. House Sparrow

Select the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 1, 2 & 3

[C] Only 2, 3 & 4

[D] Only 2

Answer: [A] Only 1 & 2

Nicobar Flying Fix is a mammal. House Sparrow comes under Least Concerned.

199. Consider the following statements:

1. Sea cow is found in both Gulf of Katch and Gulf of Mannar

2. Lion-tailed Macaque is found both in Western Ghats and Eastern Himalayas

Which among the above is / are correct statements?

[A] Only 1

[B] Only 2

[C] Both 1 & 2

[D] Neither 1 nor 2

Answer: [A] Only 1

Dugong (Sea Cow) is found in India in Gulf of Katch, Gulf of Mannar as well as Andaman & Nicobar Islands. Largest Dugong was as long as 13.5 ft and was found in Gulf of Katch in India. In India, they are found in Gulf of Kutch, the only population remaining in western India and Gulf of Mannar. The Gulf of Mannar Biosphere (GoMB) has the largest population of dugongs in India. They are also found near the Andaman and Nicobar Islands. Lion-tailed Macaque is found in India in Western Ghats.

200. With reference to the "Basel Convention" on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, consider the following statements:

1. It was signed explicitly to prevent transfer of Hazardous wastes from the developed countries to developing and less developed countries

2. It talks explicitly about the Nuclear wastes and Hazards

3. As per this convention, a waste is called Hazardous waste if it is defined as Hazardous in the law of importing country

Which of the above is / are correct statements?

[A] Only 1 is correct

[B] Only 1 & 2 are correct

[C] Only 2 & 3 are correct

[D] 1, 2 & 3 are correct

Answer: [A] Only 1 is correct

1. Basel Convention does not talk about the Nuclear waste
2. It defines the waste as something which has been defined as hazardous in the legislation of exporting OR importing OR the transit country.

General Knowledge Today

Environment Practice Test: Question 200 to 251

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201. The so called "Lessepsian migration" is __:

1. related to marine species of across Suez Canal
2. due to rise of temperature of the ocean water

Which among the above statements is/ are correct?

[A] Only 1 is correct

[B] Only 2 is correct

[C] Both 1 & 2 are correct

[D] Both 1 & 2 are incorrect

Answer: [A] Only 1 is correct

Lessepsian migration is the ongoing migration of marine species across the Suez Canal, usually from the Red Sea to the Mediterranean Sea, more rarely in the opposite direction. It is named after Ferdinand de Lesseps, the engineer in charge of the canal's construction. Invasive species originated from the Red Sea and introduced into the Mediterranean by the construction of the canal have become a major component of the Mediterranean ecosystem, and have serious impacts on the Mediterranean ecology, endangering many local and endemic Mediterranean species.

202. Biologists say that insects are essential to the survival of the earthâ□□s delicate ecosystem. The insects play important role in __:

1. Carbon cycle
2. Nitrogen Cycle
3. Food cycle

Select the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

Most cockroaches feed on decaying organic matter, which traps a lot of nitrogen. The cockroach's feeding has the effect of releasing that nitrogen (in their faeces) which then gets into the soil and is used by plants. The earth's 5,000—10,000 cockroach species are also an important source of food for many birds and small mammals such as mice and rats, and thus an important part of the food cycle.

203. Consider the following Fauna:

1. Congress grass
2. Water hyacinth
3. Nilakurinji

Which among the above is / are invasive species?

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [A] Only 1 & 2

The Congress Grass (Parthenium hysterophorus) inhibits the germination and growth of many plants and induces hay fever, asthma, skin rashes, and eczema in human beings. Toxic to animals, it can also taint mutton and make dairy milk unpalatable owing to its odour.

Water hyacinth (Eichhornia crassipes):

Aquatic plant of tropical South America that flourishes in warm climates in Central America, North America, Africa, Asia, Australia and New Zealand. The hyacinth grows in thick rafts, deoxygenating the water for other species and impeding water flow and navigation.

204. In which among the following states of India, the forest cover comprises over 75 percent of the State's area?

1. Nagaland
2. Arunanchal Pradesh
3. Tripura
4. Manipur

Select the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 1, 2 & 3

[C] Only 2, 3 & 4

[D] 1, 2, 3 & 4

Answer: [D] 1, 2, 3 & 4

States from northeast like Nagaland, Arunanchal Pradesh, Tripura and Manipur, whose forest cover comprises over 75 percent of the State's area, have shown a decrease in forest cover in latest state of forests report.

205. Consider the following statements:

1. Saltwater crocodile is the largest of all living reptiles
2. Saltwater crocodile is one of the endangered species in the IUCN red list

Which among the above is / are correct statements?

[A] Only 1

[B] Only 2

[C] Both 1 & 2

[D] Neither 1 nor 2

Answer: [A] Only 1

Saltwater Crocodile comes under least concerned. It is largest of all living reptiles, as well as the largest terrestrial and riparian predator in the world.

206. Which of the following can be called Ecosystem services?

1. Pollination
2. Soil formation
3. Nutrient recycling
4. Asexual Breeding

Select the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 1, 2 & 3

[C] Only 2, 3 & 4

[D] 1, 2, 3 & 4

Answer: [B] Only 1, 2 & 3

207. Consider the following statements:

1. A food web shows the main food links and interconnection of many food chains
2. Ecological Efficiency denotes ratio between energy flow at different points along a food chain

Which among the above is / are correct statements?

[A] Only 1

[B] Only 2

[C] Both 1 & 2

[D] Neither 1 nor 2

Answer: [C] Both 1 & 2

208. Consider the following bird species:

1. Forest owlet
2. Jerdon's courser
3. Pink-headed duck

Which among the above is / are found in wild in peninsular India?

[A] Only 1
[B] Only 1 & 2
[C] Only 2 & 3
[D] 1, 2 & 3

Answer: [B] Only 1 & 2

First two are correct. Kindly note that The cheetah (Acinonyx jubatus) and the pink-headed duck (Rhodonessa caryophyllacea) are among species that have become extinct.

209. The scientists warn that Earth's sixth mass biological extinction event is lurking near us. On what account, this extinction is different from earlier extinctions?

1. The current crisis is caused by the humans and its taking place at a faster rate
2. The highest rate of decline is found in large animals

Select the correct option from the codes given below:

[A] Only 1
[B] Only 2
[C] Both 1 & 2
[D] Neither 1 nor 2

Answer: [A] Only 1

Nearly a quarter of mammals, one-third of amphibians, more than one in eight birds, and more than a fifth of plant species now face the threat of extinction Large animals — described as megafauna and including elephants, rhinoceroses, polar bears and countless other species worldwide — face the highest rate of decline, a trend that matches previous extinction events.

210. Consider the following statements:

1. Terrestrial biodiversity tends to be highest at low latitudes near the equator
2. Terrestrial biodiversity is up to 25 times greater than ocean biodiversity

Which among the above is / are correct statements?

[A] Only 1
[B] Only 2
[C] Both 1 & 2
[D] Neither 1 nor 2

Answer: [C] Both 1 & 2

Terrestrial biodiversity tends to be highest at low latitudes near the equator, mainly because of the warm climate and high primary productivity. The increase in species richness or biodiversity that occurs from the poles to the tropics, often referred to as the Latitudinal Diversity Gradient (LDG). Kindly note that Terrestrial biodiversity is up to 25 times greater

than ocean biodiversity. fifth of the world's marine species are crustaceans such as crabs, lobsters, krill and barnacles. Add molluscs (squid and octopus) and fish (including sharks) and that accounts for up to half the species in the seas.

The charismatic species often used in conservation campaigning — whales, sea lions, turtles and sea birds — account for less than 2 per cent.

211. Consider the following statements:

1. Islands are home to one fifth of earth's terrestrial biodiversity

2. Most of the vertebrate extinctions in last five centuries have happened on islands

Which among the above is / are correct statements?

[A] Only 1

[B] Only 2

[C] Both 1 & 2

[D] Neither 1 nor 2

Answer: [C] Both 1 & 2

Islands house a disproportionate amount of the world's biodiversity: although less than 5 per cent of the world's land area, they are home to over 20 per cent of the planet's terrestrial biodiversity, and in the last 500 years, 80 per cent of vertebrate extinctions have been on islands.

212. Consider the following fauna of India:

1. Tiger

2. Lions

3. Rhino

4. Elephants

Currently, the Government of India has sanctioned special protection forces for which of the above?

[A] 1 & 2

[B] 1 & 3

[C] 1, 3 & 4

[D] 1, 2, 3 & 4

Answer: [B] 1 & 3

As of now, 4 Tiger Protection Force and 1 Rhino Protection Force have been sanctioned.

213. Consider the following statements with reference to the Green Climate Fund:

1. This fund is aimed to provide money and other assistance to help poorer nations to adapt

climate changes

2. Most beneficiary countries are in Africa, Asia and small island nations

Choose the correct option from the codes given below:

[A] Only 1

[B] Only 2

[C] Both 1 & 2

[D] Neither 1 nor 2

Answer: [C] Both 1 & 2

214. Consider the following:

1. Bengal tiger (Panthera tigris)
2. African elephant (Loxodonta sp.)
3. Asian elephant (Elephas maximus)

In terms of biodiversity, which among the above can be called "Flagship species"?

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

A flagship species is a species, which is selected to act as an ambassador, icon or symbol for a defined habitat, issue, campaign or environmental cause.

215. Krishna Peacock, Blue Peacock and Buddha Peacock are varieties of __?

[A] Birds

[B] Fishes

[C] Butterflies

[D] None of the above

Answer: [C] Butterflies

Krishna Peacock, Blue Peacock and Buddha Peacock are newly discovered species of butterfly in South-East Asia and in East India.

216. Which of the following animals have been given highest protection by the Government of India by placing them in the Schedule -1 of Wildlife Protection act of 1978?

1. Chiru
2. Hangul
3. Black Buck
4. Hoolock Gibbon

Select the correct option from the codes given below:

[A] Only 1, 2 & 3

[B] Only 2, 3 & 4

[C] Only 1, 3 & 4

[D] 1, 2, 3 & 4

Answer: [D] 1, 2, 3 & 4

Also note that Jammu & Kashmir Government has its own wildlife Protection act of 1978. Chiru is in list I of that act also.

217. Ozone disinfection of water is generally preferred than the Chlorination. Which among the following is / are advantage / advantages of Ozone disinfection over the Chlorination?

1. Ozone disinfection does produce harmful side products generally
2. Ozone disinfection leaves no disinfectant residual in the water
3. The taste and odor of water don't get changed by Ozone disinfection

Select the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3

[C] 1, 2 & 3

[D] Only 1 & 3

Answer: [D] Only 1 & 3

Ozone disinfection leaves no disinfectant residual in the water is a disadvantage rather.

218. Consider the following:

1. Sea Cows
2. Sea Cucumbers
3. Sea Fan

Which among the above is / are protected by wildlife protection act in India?

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

219. Among the ecosystem mentioned below, where can one find maximum biodiversity?

[A] Mangroves

[B] Desert

[C] Coral reefs

[D] Alpine meadows

Answer: [C] Coral reefs

Corals come next to tropical rain forests.

220. Which among the following is / are reasons behind promotion of production of Neem Coated Urea?

1. It increases crop yield and fertilizer use efficiency
2. It decreases underground water contamination
3. It reduces pilferage of subsidised Urea in other industries

Select the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

All are correct options.

221. The Biodiversity Management Committees:

1. are established by the state governments by gazette notification
2. established to promote conservation of the folk varieties and cultivars
3. advise the state government on matters of biodiversity conservation on state level

Which among the above statements is / are correct?

[A] Only 1 & 2

[B] Only 2

[C] Only 2 & 3

[D] 1, 2 & 3

Answer: [A] Only 1 & 2

Biodiversity Management Committee under Biological Diversity Act

- Every local body shall constitute a Biodiversity Management Committee within its area for the purpose of promoting conservation, sustainable use and documentation of biological diversity including preservation of habitats, conservation of land races, folk varieties and cultivars, domesticated stocks and breeds of animals and microorganisms and chronicling of knowledge relating to biological diversity.
- For the purposes of this sub section, o “cultivar” means a variety of plant that has originated and persisted under cultivation or was specifically bred for the purpose of cultivation o “folk variety” means a cultivated variety of plant that was developed,

grown and exchanged informally among farmers o "landrace" means primitive cultivar that was grown by ancient farmers and their successors.

- The National Biodiversity Authority and the State Biodiversity Boards shall consult the Biodiversity Management Committees while taking any decision relating to the use of biological resources and knowledge associated with such resources occurring within the territorial jurisdiction of the Biodiversity Management Committee.
- The Biodiversity Management Committees may levy charges by way of collection fees from any person for accessing or collecting any biological resource for commercial purposes from areas falling within its territorial jurisdiction.

222. Among the various ways to slow down the loss of biodiversity, which among the following would be the most effective?

[A] Freezing fertilized eggs of endangered animals in case the species become extinct in the wild

[B] Setting aside small plots of land in a variety of ecosystems, such as forests, grasslands, and marshes

[C] Creating large parks/preserves in biodiversity hotspots

[D] Requiring every country to maintain a seed bank

Answer: [C] Creating large parks/preserves in biodiversity hotspots

Third option is the correct answer

223. The Ganges river dolphin

1. can only live in freshwater
2. is essentially blind
3. is mostly vegetarian and survives on aquatic flora
4. has no real fins

Choose the correct option from the codes given below:

[A] Only 1 & 4

[B] Only 1 & 2

[C] Only 1, 2 & 3

[D] Only 3

Answer: [B] Only 1 & 2

The Ganges river dolphin can only live in freshwater and is essentially blind. They are non-veg as other dolphins and hunt by emitting ultrasonic sounds, which bounces off of fish and

other prey. They have real fins, the statement was a trap.

224. No alteration of boundaries can be made without recommendation of National Board for Wild Life in case of ____:

1. Biosphere Reserves
2. Wildlife sanctuaries
3. Tiger Reserves
4. National Parks

Choose the correct option:

[A] Only 2 & 4

[B] Only 1, 3 & 4

[C] Only 3 & 4

[D] Only 3

Answer: [D] Only 3

Power of National Board of Wildlife related to Protected Areas:

8 The Board may recommend the alteration of the boundaries of a sanctuary / National Park to the State Government.

8 The Board may approve or disapprove of the construction of commercial tourist lodges, hotels, zoos, safari parks inside a sanctuary / National Park by the Chief Wild Life Warden.

8 No alteration of boundaries of a tiger reserve shall be made except on recommendation of the National Tiger Conservation Authority and the National Board for Wild Life.

8 No State Government shall de-notify a tiger reserve, except in public interest with the approval of the National Tiger Conservation Authority and the National Board for Wild Life.

225. The maximum number of species among the Indian Fauna belongs to __?

[A] Mammals

[B] Reptiles

[C] Molluscs

[D] Arthropods

Answer: [D] Arthropods

Among all zoological taxa , the number of arthropods is maximum.An arthopod is an invertebrate animal having an exoskeleton, a segmented bodyandjointappendages.Arthropoda, includes the insects, arachnids, myriapods, and crustaceans.Arthropod are characterized by their jointed limbs and cuticle made of chitin, often mineralised with calcium carbonate.

226. The environmental change can present rapid and destructive influences on populations by

causing:

1. Forced migration
2. Competition and conflict for natural resources
3. Political destabilization

Select the correct option from the codes given below:

[A] Only 1 & 2
[B] Only 2 & 3
[C] Only 1 & 3
[D] 1, 2 & 3

Answer: [D] 1, 2 & 3

All the statement are correct.

227. The Environment Protection related principle of common but differentiated responsibility (CBDR) was enshrined in __?

[A] Rio Declaration
[B] Nagoya Protocol
[C] Montreal Protocol
[D] Basel Action Network

Answer: [A] Rio Declaration

The principle of common but differentiated responsibility (CBDR) is an important principle of international environmental law, explicitly formulated in the Principle 7 of the Rio Declaration.

228. The National Green Tribunal has been given original and appellate jurisdiction on which among the following maters?

1. Water related matters
2. Air related matters
3. Forest related matters
4. Biodiversity related matters
5. Mining related Matters

Choose the correct option from the codes given below:

[A] Only 3 & 4
[B] Only 2, 3 & 4
[C] Only 1, 2, 3 & 4

[D] 1, 2, 3, 4 & 5

Answer: [C] Only 1, 2, 3 & 4

The NGT was launched in October 2010, for effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources including enforcement of any legal right relating to environment and giving relief and compensation for damages to persons and property and for matters connected therewith or incidental thereto. NGT has got original as well as appellate jurisdiction on matters pertaining to Seven Acts related to water, air, forest conservation, environment protection and biological diversity.

These acts are – Water Act, 1974, Water Cess Act 1977, Forest Act 1980, Air Act, 1981, Environment Protection Act, 1986, Public Liability Insurance Act, 1991 and Biodiversity Act, 2002.

229. An Ecologically Sensitive Area (ESA) :

1. is notified by State Government under state legislations

2. is supposed to be entirely free from Human interference

3. is regulated with due consideration to local contexts

Which among the above is / are correct statements?

[A] Only 1 & 3

[B] Only 2 & 3

[C] Only 3

[D] 1, 2 & 3

Answer: [C] Only 3

The concept of 'Ecologically Sensitive Areas' is very different from that a protected area like a national park which is supposed to be entirely free from human interference, though in reality many management interventions such as creation of water holes and tourism related activities do continue even in the national parks. 'Ecologically Sensitive Areas' are areas under human use, sometimes quite intense human use such as generation of thermal power and cultivation of chikoo in Dahanu taluka. Hence, ESAs are to be viewed as areas where human activities will continue, but be prudently regulated under the Environment (Protection) Act, 1986. ESAs are not at all meant to stop development in ways that would hurt local people, but to ensure that development is environment friendly and people oriented, as well as serve to preserve the ecological heritage on a long term basis. There are no set regulations, such as ban on all new industries, or on conversion of agricultural into commercial land, that would

prevail in every Ecologically Sensitive Area; instead, the regulations will be worked out with due respect to local context.

230. Consider the following:

1. Wildlife Sanctuaries
2. National Parks
3. Wildlife Corridors
4. Biospheres
5. Environmentally Sensitive Area

Which among the above are established as per the provisions of Wildlife Protection Act 1972?

[A] 1, 2 & 3
[B] 1, 2, 3 & 5
[C] 1, 2, 3 & 4
[D] 1 & 2

Answer: [D] 1 & 2

The proposed amendment incorporates a scientific definition of wildlife corridors into the act. This is a very important step which will save such areas from the threat of mining. As of now, the wildlife corridors are not as legal entities in India as wildlife sanctuaries and national parks. This creates confusion and that is why the proposed amendment would make sure these corridors become a legal entity so that they are protected by law and there can be no scope for confusion.

231. Consider the following statements:

1. National Parks
2. Wildlife Sanctuaries
3. Tiger Reserves

The state governments can declare a particular area as which among the above categories?

[A] Only 2
[B] Only 1 & 2
[C] Only 2 & 3
[D] 1, 2 & 3

Answer: [B] Only 1 & 2

Please note that Tiger Reserves come under the "Project Tiger" that was launched in April,

1973. It was later given statutory backing by amendment of the Wildlife Protection Act in 2006 and thus National Tiger Conservation Authority was created. The NTCA is responsible for implementation of the Project Tiger plan to protect endangered tigers. It comes under Central Government, so central government declares the tiger reserves, though state governments can send their proposals and requests to NTCA.

232. In recent times, which among the following sites have emerged as nesting sites for critically endangered vultures?

1. Gandhisagar Wildlife Sanctuary
2. Panna Tiger Reserve
3. Nagarahole Wildlife Sanctuary
4. Sultanpur Bird Sanctuary

Chose the correct answer from the codes given below:

[A] Only 1 & 2

[B] Only 1, 2 & 3

[C] Only 2, 3 & 4

[D] 1, 2, 3 & 4

Answer: [A] Only 1 & 2

Vultures, which are on the verge of extinction, have been restricted to Panna Tiger Reserve where efforts are being taken for their protection and conservation. Now Gandhisagar wildlife sanctuary in Mandsaur and Neemach districts of Madhya Pradesh has emerged as second best nesting site for the Vultures.

233. Which among the following can induce the formation of Ground Level Ozone?

1. Nitrogen Oxides
2. Carbon Dioxide
3. Methane

Select the correct option from the codes given below:

[A] Only 1

[B] Only 1 & 2

[C] Only 1 & 3

[D] 1, 2 & 3

Answer: [C] Only 1 & 3

Its not CO2 that plays role in making of the Ground Level Ozone. Ground Level Ozone is formed from the Nitrogen Oxides, CO and Volatile Organic Compounds (VOCs). The

Ground Level Ozone is also called the Tropospheric Ozone. In the last 100 years the emission of Methane, which is a Volatile Organic Compound has increased dramatically and it has contributed to the Ground Level Ozone formation.

234. With reference to the forests in India, which among the following is / are correct statements about the "Protected Forests"?

1. No public entry is allowed for collection of timber or grazing of cattle in protected forests
2. Protected forests are under full control of the government

Select the correct option from the codes given below:

[A] Only 1
[B] Only 2
[C] Both 1 & 2
[D] Neither 1 nor 2

Answer: [D] Neither 1 nor 2

On the basis of administration, the forests in India are of three categories:

1.Reserved Forests: These forests are under the direct supervision of the government and no public entry is allowed for collection of timber or grazing of cattle. About 53 per cent of the total forest area falls in this category.

2.Protected Forests: These forests are looked after by the government, but the local people are allowed to collect fuel-wood/timber and graze their cattle without causing serious damage to the forests. These forests occupy about 29 per cent of the total forest area of the country.

3.Unclassified Forests: The unclassified forests are those in which there is no restriction on the cutting of trees and grazing of cattle. About 18 per cent of the total forest area of the country falls under this category. (Mazid Hussain)

235. Consider the following statements:

1. Largest number of Wild life sanctuaries and National Parks in India are located in Madhya Pradesh
2. Largest number of Handloom and Handicrafts clusters in India are located in Uttar Pradesh

Which among the above is / are correct statements?

[A] Only 1
[B] Only 2
[C] Both 1 & 2
[D] Neither 1 nor 2

Answer: [C] Both 1 & 2

236. The Cartagena Protocol on Biosafety administers:

1. Biosafety Clearing-House
2. Global Environment Facility
3. Import and Export of Living Modified Organisms (LMOs)

Select the correct option from the codes given below:

[A] Only 1

[B] Only 1 & 3

[C] Only 1 & 2

[D] 1, 2 & 3

Answer: [B] Only 1 & 3

The Cartagena Protocol on Biosafety to the Convention on Biological Diversity is an international treaty governing the movements of living modified organisms (LMOs) resulting from modern biotechnology from one country to another. It was adopted on 29 January 2000 as a supplementary agreement to the Convention on Biological Diversity and entered into force on 11 September 2003. India is a party to the protocol. The Protocol also establishes a Biosafety Clearing-House to facilitate the exchange of information on living modified organisms and to assist countries in the implementation of the Protocol.

237. The National Green Tribunal (NGT) in India:

1. is a constitutional body
2. is first of its kind in the world
3. has original jurisdiction in matters related to environment

Which among the above is / are correct statements?

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 3

[D] None of them

Answer: [C] Only 3

National Green Tribunal Act, 2010 (NGT) is an Act of the Parliament of India which enables creation of a special tribunal to handle the expeditious disposal of the cases pertaining to environmental issues. This court can rightly be called 'special' because India is the third country following Australia and New Zealand to have such a system. The Chairman of the tribunal is required to be a serving or retired Chief Justice of a High Court or a judge of the Supreme Court of India. The Tribunal has Original Jurisdiction on matters of "substantial

question relating to environment" (i.e. a community at large is affected, damage to public health at broader level) & "damage to environment due to specific activity" (such as pollution). However there is no specific method is defined in Law for determining "substantial" damage to environment, property or public health.

238. The sudden rise in the number of cell phone towers has been held responsible for sudden decline of House sparrow (Passer domesticus). The electromagnetic pollution from mobile phone towers affects this bird by adversely affecting its:

[A] Orientation and navigation

[B] Excretory system & kidney

[C] Reproductive cycle

[D] Vision and olfactory system

Answer: [C] Reproductive cycle

- The House sparrow (Passer domesticus) was once a common sight in our cities and its number has gone down drastically in recent years. The electromagnetic pollution from mobile phone towers harms its reproductive cycle.
- Further, while the older ones feed on grains, the younger ones peck on insects. Due to the rapid encroachment of green space, use of insecticides, pesticides and herbicides food has become scarce for the birds. Starvation has killed a majority of them.
- Nesting was another problem. Due to the rapid growth in the high-rise buildings, nesting became a big issue for the birds. [The Hindu]

239. Consider the following pesticides:

1. DDT
2. Aldrin
3. Endosulfan
4. Pyrethrin

Which among the above have tendency to remain intact in environment and to accumulate in fatty tissue?

[A] Only 1 & 2

[B] Only 2 & 3

[C] Only 1, 2 & 3

[D] 1, 2, 3 & 4

Answer: [C] Only 1, 2 & 3

DDT and other chlorinated pesticides such as aldrin, endrin, lindane and endosulfan are

persistent organic pollutants (POPs), which remain intact and have a tendency to accumulate in fatty tissue. Pyrethroids (such as Pyrethrin) and Chlorophenols are Non-persistent pesticides.

240. Which among the following is the most suitable word for a local population genetically, structurally and functionally adapted to its local environment?

[A] Ecotype

[B] Ecophene

[C] Ecad

[D] Ecocline

Answer: [B] Ecophene

The range of phenotypic modifications produced by one genotype within the limits of the habitat under which the genotype is found in nature.

241. Found in different shapes and sizes, fungi play an important role in our everyday life. Which among the following is / are correct statements about them?

1. Fungi are not plants since they don't have chlorophyll
2. All fungi live as either saprophytes or as parasites

Select the correct option from the codes given below:

[A] Only 1

[B] Only 2

[C] Both 1 & 2

[D] Neither 1 nor 2

Answer: [C] Both 1 & 2

Fungus is not a plant since it does not have chlorophyll — a pigment which is responsible for photosynthesis in plants. It is not an animal either, although it is closely related to it. Since they lack chlorophyll they cannot produce food for themselves to live on. So they live in two forms, either as saprophytes or as parasites. Saprophytes grow on dead organic matter (such as wood) and decompose it to obtain food for their growth. The parasitic fungus gets its food from living organisms (either plant or an animal).

Some of the parasitic fungi may cause disease to the host and hence is harmful to them. But some of them are mutualistic. For example, certain species of fungi develop a close relationship with plants and live in their root. These are called mycorrhiza or root nodules. The fungi decompose leaf litter or other animal matter and provide nutrients to the plants. In turn, they get food from the plant on which they live.

242. Which of the following is an example of in situ conservation of biodiversity?

[A] Captive breeding

[B] Seed bank

[C] National park

[D] Pollen bank

Answer: [C] National park

243. Consider the following statements:

1. Presence of Ammonia in groundwater indicates a nearby coal mine

2. Presence of nitrates in groundwater indicates contamination by fertilizers and waste organic matter

Which among the above statements is / are correct?

[A] Only 1

[B] Only 2

[C] Both 1 & 2

[D] Neither 1 nor 2

Answer: [B] Only 2

244. Some studies have suggested that impacts of Green House Gases and Aerosols tend to be in opposite direction. Consider the following statements in this context:

1. While Green House Gases tend to reduce the precipitation, Aerosols tend to increase the precipitation

2. While greenhouse gases tend to persist and thereby accumulate in the atmosphere, aerosols are generally short-lived

Which among the above is / are correct statements?

[A] Only 1

[B] Only 2

[C] Both 1 & 2

[D] Neither 1 nor 2

Answer: [B] Only 2

245. The CITES treaty has been helpful in protecting endangered animals and plants by __:

[A] Listing all species that can be hunted, traded, and used commercially

[B] Listing those species and products whose international trade is controlled

[C] Funding projects for breeding endangered plants and animals

[D] Preventing the hunting of whales and dolphins

Answer: [B] Listing those species and products whose international trade is

controlled

246. Which among the following is oceans is the largest consistent contributor to the global ocean warming trends in last few decades?

[A] Indian Ocean

[B] Pacific Ocean

[C] Atlantic Ocean

[D] Arctic Ocean

Answer: [A] Indian Ocean

The Indian Ocean has been warming at a rate faster than thought before (1.2 deg C during the past century). It is also the largest consistent contributor to the global ocean warming trends. Recent studies show that a warm Indian Ocean can in turn modulate the Pacific conditions including the El Nino events. So basically, such large warming over the Indian Ocean has implications on the global climate.

247. Which of the following is used as a coagulant for removal of phosphates from wastewater?

[A] Aluminium sulphate

[B] Iron sulphate

[C] Copper sulphate

[D] Potassium chromate

Answer: [A] Aluminium sulphate

248. Consider the following statements:

1. Coliform bacteria is one of the microbial indicators of water contamination
2. Mixing of sewage with ground water results in increased nitrate level

Which among the above is/ are correct statements?

[A] Only 1

[B] Only 2

[C] Both 1 & 2

[D] Neither 1 nor 2

Answer: [C] Both 1 & 2

249. Recently, a set of guidelines called Plant Protection Code (PPC) has been released with respect to cultivation of __?

[A] Tea

[B] Coffee

[C] Sugarcane

[D] Cotton

Answer: [A] Tea

It is a set of guidelines for regulating the chemical inputs in tea cultivation. Official document is available on Tea Board website and may be useful if you have "agriculture" as optional subject.

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

1. Parthenium is an endemic plant species of India
2. African catfish is a threat to indigenous catfishes
3. Lantana is a parasitic plant

Select the correct option from the codes given below:

[A] Only 1 & 2

[B] Only 2

[C] Only 2 & 3

[D] 1, 2 & 3

Answer: [B] Only 2

Some species of Lantana are invasive but it's not a a parasitic plant.