

QB365

Important Questions - Environmental Issues

12th Standard CBSE

Biology

Reg.No. :

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Time : 01:00:00 Hrs

Total Marks : 50

**Section - A**

- 1) Which of the following is not done in a wildlife sanctuary? 1  
(a) fauna is conserved (b) flora is conserved (c) soil and flora is utilized (d) hunting is prohibited
- 2) Genetic diversity in agricultural crops is threatened by 1  
(a) the introduction of high yielding varieties (b) intensive use of fertilizers (c) extensive intercropping  
(d) intensive use of biopesticides
- 3) Which of the following is a correctly matched pair of an endangered animal and a national park? 1  
(a) Great Indian bustard: Keoladeo national park (b) Lion: Corbett National park  
(c) Rhinoceros: Kaziranga national park (d) Wild ass: Dudhwa National park
- 4) Biosphere reserves differ from national parks and wildlife sanctuaries because in the former 1  
(a) human beings are not allowed to enter (b) people are an integral part of the system  
(c) Plants are paid greater attention than the animals (d) living and preserved for posterity
- 5) The world biodiversity day is celebrated annually on 1  
(a) 5th June (b) 29th December (c) 22nd April (d) 16th September
- 6) Manas sanctuary is located at 1  
(a) Rajasthan (b) Assam (c) Bihar (d) Gujarat
- 7) Extinction of a species in a food chain is compensated by 1  
(a) food chain (b) ecological pyramid (c) food web (d) none of these
- 8) Which one of the following is not observed in biodiversity hotspots? 1  
(a) lesser inter-specific competition (b) species richness (c) endemism (d) accelerated species loss
- 9) All the following are included under in sites conservation except 1  
(a) National park (b) Sanctuary (c) Botanical garden (d) Biosphere reserve
- 10) The extinction of passenger pigeon was due to: 1  
(a) Increased number of predatory birds. (b) Over-exploitation by humans.  
(c) Non-availability of the food. (d) Bird flu virus infection.

**Section - B**

- 11) Write any two sources of electronic wasters. Mention any one way each, of its disposal in developing and developed countries. 2

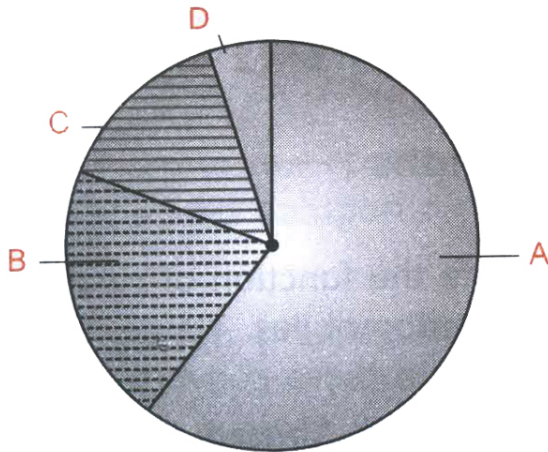
12) Refrigerants are considered to be a necessity in modern living, but are said to be responsible ozone holes detected in Antarctica. Justify. 2

13) Match the items given in column A and B: 2

Column A	Column B
(a) Catalytic converter (b) Electrostatic precipitator (c) Ear muffs (d) Landfills	(i) Particular matter (ii) Carbon monoxide and nitrogen oxides (iii) High noise level (iv) Solid wastes

14) Differentiate between 'bad' ozone and 'good' ozone 2

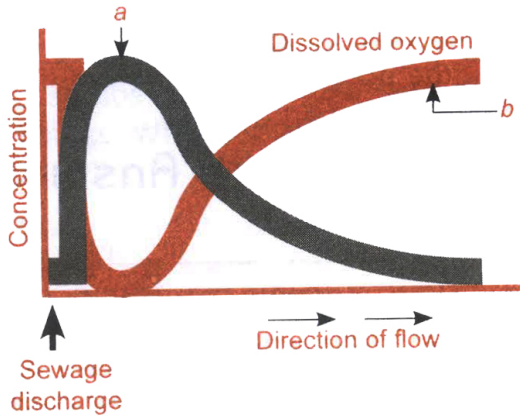
15) The figure below shows the relative contribution of four greenhouse gases to global warming: 2



(i) Identify the gases A and C. (ii) Why are these four gases

called the greenhouse gases?

16) Explain giving reasons the cause of appearance of peaks 'a' and 'b' in the graph shown below. 2



**Effect of sewage discharge on some important characteristics of a river**

17) Write the effects of hydrocarbons (HCs). 2

18) Briefly write the events that Reduce biological oxygen demand of primary effluent. 2

19) Match the items given in column I with appropriate items (one or more) of column II.

2

Column I	Column II
(i) Rich biodiversity	(a) Within community diversity
(ii) Alpha diversity	(b) Diversity of whole geographical region.
(iii) Gamma diversity	(c) Tropical areas
(iv) Endangered species	(d) Dodo
(v) Extinct species	(e) Great Indian bustard
	(f) Coral reefs

20) How have human activities caused desertification? Explain

2

### Section - C

21) What is eutrophication? How does a lake undergo accelerated eutrophication?

5

22) Explain the cause of global warming. Why is it a warning to mankind?

5

23) (a) What are hot spots of biodiversity?

5

(b) List four main criteria for determining a particular place as a hot spot.

(c) Among the hot spots of the world, list two which are located in India.

24) While going to Nainital during summer vacations, Amitabh saw a board indicating the direction to Jim Corbett National Park. He asked his uncle, who happened to be a forest Officer, about national parks. He explained that national parks are maintained by government solely for the welfare of entire wild life in it read the above passage and answer the following questions:

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(i) How is wild life maintained in a national park?

(ii) name two other national parks.

(iii) What value is displayed by Amitabh's uncle?

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### Section - A

1) (c) soil and flora is utilized

1

2) (c) extensive intercropping

1

3) (c) Rhinoceros: Kaziranga national park

1

4) (b) people are an integral part of the system

1

5) (b) 29th December

1

6) (b) Assam

1

7) (c) food web

1

8) (a) lesser inter-specific competition

1

9) (c) Botanical garden

1

10) (b) Over-exploitation by humans.

1

### Section - B

11)

2

(i) Irreparable computers and (ii) other electronic gadgets. (i) Incineration and (ii) burying in the landfills.  
- In developing countries, they are recycled involving manual labourers. - In developed countries, they are recycled in specifically built chambers, without involving manual labourers

12)

2

- The CFCs discharged in the lower part of atmosphere move upward and reach the stratosphere. - In the stratosphere, UV rays act on them releasing Cl atoms. - Cl acts as a catalyst and degrades ozone releasing molecular oxygen - Since Cl atoms are not consumed in the reaction, whatever CFCs are added to the stratosphere, continue to damage the ozone and cause ozone depletion. - So, the emission of CFCs must be reduced.

13) (a)-(ii), (b)-(i), (c)-(iii), (d)-(iv)

2

14)

Bad ozone	Good ozone
- The ozone found in the lower atmosphere is bad ozone. - It harms plants and animals.	- The ozone found in the upper part of atmosphere (stratosphere) is called good ozone. - It absorbs UV radiation and protects the living organisms.

2

15)

2

(i) A - Carbon dioxide

C - Chlorofluorocarbons.

(ii) - These gases absorb some of the infrared radiation, emitted by the surface.

- The molecules of these gases radiate heat energy, most of which comes back to the earth's surface and heat it again.

- Since these gases are responsible for the greenhouse effect, i.e. heating of the earth's surface, they are called greenhouse gases.

16)

2

Peak 'Q'

- The sewage discharged into the river contains organic matter.

- The decomposers degrade the organic matter for their energy requirements and use a lot of oxygen in the process; hence BOD is at peak level in the river near to the point of sewage discharge.

Peak 'b'

- As water flows to a distance, the amount of organic matter becomes less and hence the requirement of oxygen is also decreased; this leads to an increase in the level of dissolved oxygen.

17)

2

**Effects of hydrocarbons:** 1. Benzene and its derivatives are carcinogens. 2. Formaldehyde causes indoor pollution. 3. Some reactive HCs contribute to formation of secondary pollutants.

18)

2

Events that **reduce biological oxygen demand of primary effluent**. The amount of oxygen required for microbial breakdown of biodegradable organic matter is called BOD. It is higher in polluted water and lesser in drinking water. Primary treatment is physical treatment. The supernation of settling tank is called **effluent**. It is put into **biological treatment** involving **microbial decomposition** fine organic matter. It is further heated by **trickling filter and activated sludge method**.

19) (i) c, f (ii) a (iii) b (iv) e (v) d

2

20)

2

(i) Deforestation by clearing forest area for cultivation forest area for cultivation of crops, grazing the cattle, felling of trees for timber etc.

(ii) Overgrazing, that leads to soil erosion in the absences to hydrological cycle, by deforestation.

### Section - C

21)

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- The natural ageing of a lake is called eutrophication. It is the biological enrichment of its water.
- In a young lake, there is very little life and the water is cold.
- As time advances, the streams draining into it start adding nutrients like phosphates and nitrates.
- They stimulate the growth of algae, phytoplanktons and some small plants.
- So, the quantity of organic matter increases and the water becomes warmer and shallower; hence the decomposers start flourishing.
- The decomposers flourish and make use of a large quantity of oxygen for decomposition.
- This leads to depletion of dissolved oxygen of the water and mortality of fish and other aquatic organisms.
- The eutrophied water bodies can lead to algal blooms, which further add organic matter and lead to oxygen depletion.

22)

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Causes of global warming:

(i) Deforestation

(ii) Burning of fossil fuels

(iii) Excess use of nitrogenous fertilisers

(iv) Increased amounts of greenhouse gases ( $CO_2$ ,  $CH_4$ ,  $CFCs$ ,  $N_2O$ ).

It is a warning to humans because

(i) it leads to deleterious changes in the environment resulting in odd climatic changes.

(ii) it can lead to melting of polar ice caps and ice caps on mountain tops and result in a rise in sea level which can submerge many coastal areas.

23)

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(a) Hot spots are the regions of rich biodiversity which have been declared sensitive due to direct or indirect interference of human activities.

(b) Four main criteria are-

(i) Rich species diversity

(ii) Number of endemic species

(iii) Degree of threat in terms of habitat loss, and

(iv) Degree of exploitation.

(c) Western ghats and Eastern Himalayas.

24)

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(i) In a national park, a track of land (core zone) is reserved and maintained solely for wild life conservation, and operations such as plantations, cultivation, grazing are not allowed. Private ownership rights and habitat manipulation are also not permitted in this zone.

(ii) Kazipranga National Park and Kanha National Park.

(iii) Amitabh's uncle maintained his nephew's curiosity to know about surroundings, wildlife and their importance in our life.

