

Environmental Science (BCA)

: UNIT 1 :

: MULTIPLE CHOICE QUESTIONS:

1. The 'world environment day' is celebrated on
a) 15th June b) **5th June** c) 5th January d) 15th February
2. Short term properties of the atmosphere at a given place and time is referred as,
a) Climate b) Microclimate c) Season d) **Weather**
3. Which of the following is an expel of impact of the development activities on hydrosphere ?
a) air pollution b) soil pollution c) noise pollution d) **water pollution**
4. Study of trends in human population growth and prediction of future growth is called
a) **Demography** b) Biography c) Palaeography d) Psychology
5. Ozone present in 'ozonosphere' protect us from
a) Infrared radiation b) **Ultraviolet radiations**
c) Visible radiations d) None of these
6. Environmental degradation is due to
a) rapid industrialization b) urbanization
c) developmental works d) **all of the above**
7. Atmosphere has major constituents of
a) **nitrogen, oxygen, Argon** b) carbon dioxide, Nitrogen
c) Ozone, Methane, Nitrogen d) Nitrogen, Oxygen, Ozone
8. The range of temperature variations in troposphere is
a) **20⁰C to -56⁰C** b) -56⁰C to - 2⁰C
c) -2⁰C to 90⁰C d) -90⁰ to 1200⁰C
9. Ozonosphere exists in
a) **Stratosphere** b) Troposphere
c) Ionosphere d) Hydrosphere
10. The biggest pollutant receptor or sink on the earth is
a) Biosphere b) Atmosphere
c) Lithosphere d) **Hydrosphere**
11. The least pollutant receptor or sink on the earth is
a) Hydrosphere b) **Atmosphere**
c) Lithosphere d) None of these
12. The range of temperature variations in

stratosphere is

- a) 20°C to -56°C
- b) -56°C to -2°C
- c) -2°C to -90°C
- d) -90°C to 1200°C

13. Lithosphere consists of

- a) Crust
- b) Mantle
- c) Core
- d) **All of these**

14. The layer of atmosphere which provides the ideal site for flying of jet planes is

- a) Thermosphere
- b) **Stratosphere**
- c) Mesosphere
- d) Troposphere

15. The outer soil crust of the earth is known as

- a) Hydrosphere
- b) Exosphere
- c) **Lithosphere**
- d) Mesosphere

17. Earth day is celebrated on....

- a) 5th June
- b) 12th May
- c) **22nd April**
- d) 22nd May

18. A zone consisting of land, water and air which support life on earth is

- a) **Biosphere**
- b) Atmosphere
- c) Lithosphere
- d) Hydrosphere

20. Which is not true ?

- a. Lithosphere include the crust and the uppermost mantle
- b. Lithosphere underlies the stratosphere
- c. **Lithosphere provides timber**
- d. Lithosphere is broken into tectonic plates

21. The equitable use of resource is necessary for

- a) sustainable development
- b) better life style for man
- c) Sustain natural wealth
- d) **All of the above**

22. The range of temperature variation in mesosphere is.....

- a) 20°C to -56°C
- b) **-2°C to -90°C**
- c) -56°C to -2°C
- d) -90°C to 1200°C

23. Environmental degradation is due to

- a) Rapid industrialization
- b) onset of different development work
- c) fast urbanization leading to deforestation
- d) **All of the above**

24. In the atmosphere the layer above the troposphere is

- a) **Stratosphere**
- b) Exosphere
- c) Mesosphere
- d) Thermosphere

25. Which of the following is not a component of physical environment ?

- a) Atmosphere
- b) Hydrosphere
- c) **Ionosphere**
- d) Thermosphere

26. Troposphere has altitude range
 a) 11-50 km b) **0-11 km** c) 20-80 km d) 80-200 km
27. Hydrosphere denotes
 a) **Water** b) plants c) rocks and soil d) organisms
28. Lithosphere means
 a) Air b) Water c) **Rocks and soil** d) organisms
29. A zone consisting of land, water and air which support life is called
 a) **biosphere** b) atmosphere c) lithosphere
 d) hydrosphere
30. The immediate surrounding of plants and animal is
 a) Macroclimate b) Microclimate c) **Environment** d) Atmosphere
31. Place occupied by an organism in relation to environment is
 a) Habit b) Habital c) Edaphic d) all of the above
32. Hourly and weekly change in temperature and pressure Refer to
 a) **Weather** b) Climate c) nature d) both a and b
33. Solid earth crust is known as
 a) Stratosphere b) Hydrosphere c) **Lithosphere** d) Atmosphere
36. The environment which has been modified by human activity is called
 a) Anthropogenic environment b) Man made environment
 c) Natural environment d) **Both a and b**

: SHORT ANSWER QUESTIONS :

1. Define the term 'environment'.
2. What is biome environment?
3. Define environmental science.
4. Define environmental engineering.
5. What are the different components of the environment ?

6. What is biosphere ?
7. What is ozone layer ?
8. What are the different spheres of atmosphere ?
11. What are the constituents of atmosphere ?
12. How water is distributed on the earth ?
13. Define 'environment degradation'.
16. Define 'Sustainable development'
17. Environmental education is essential for engineers, why ?

Long answer questions

- Q-1. What are the components of environment? Explain by drawing sketch.
- Q-2. Give composition of atmosphere.
- Q-3. Define : environment science, environment studies.
- Q-4. Outline the scope of environment studies.
- Q-5. What is importance of environment studies?
- Q-6. Discuss multidisciplinary nature of environmental studies.
- Q-7. Define the terms:
 - Biosphere
 - Biomes
 - Lithosphere
 - Ozone layer
 - Biotic and abiotic components.
- Q-8. Write short-note on :
 - Hydrosphere
 - Lithosphere
 - Biosphere
- Q-9. Describe interaction between the components of environment.
- Q-10. What is biogeochemical cycle ? Explain carbon cycle with sketch.
- Q-11. Explain nitrogen cycle with neat sketch.
- Q-12. Write short note on: Sustainable development ?

Unit – 2 ecosystems :

MCQs :

1. Which one of the following is an autotrophic component
(a) **Algae** (c) Lion
(b) Virus (d) fungi
2. _____ is an autotroph.
(a) **produces** (b) consumer
(c) Decomposes (d) None of the above
3. Which one of these is a biotic component ?
(a) water (b) Soil
(c) Air (d) **consumer**
4. Decomposers are also known as _____
(a) producers (b) **detrivores**
(c) herbivores (d) carnivores
5. Producers & consumers by respiration return the _____ to atmosphere
(a) oxygen (b) nitrogen dioxide
(c) **carbon dioxide** (d) carnivores
6. The plant eaters the herbivores are also called as _____
(a) **primary consumers** (b) Secondary consumers
(c) tertiary consumers (d) producers
7. Forest is a _____ natural resource
(a) **Biotic** (b) abiotic
(c) Potential (d) abiotic
8. The shape of energy pyramid is _____
(a) **upright** (b) inverted
(c) spindle shaped (d) none
9. The thermophilic bacteria are found in _____
(a) forest ecosystem (b) **desert ecosystem**
(c) grass land ecosystem (d) pond ecosystem

Q-2 Short questions :

1. Define Ecosystem ?
2. What is the function of decomposers ?
3. Write the features of pond ecosystem ?
4. What is hydrological cycle ?
5. What is food chain ?

6. Explain about producers of pond ecosystem ?
7. Write about food web ?
8. Write the significance of environment studies ?
11. Mention the characteristics of desert ecosystem ?
12. What are components of ecosystem ?

Q - 3. Long questions :

1. Give a detailed account of the desert ecosystem ?
2. Give a detailed account of the pond ecosystem ?
3. Describe how food chain form a food web ?
4. Explain energy cycle in detail ?
5. Write a note on biotic component of ecosystem ?
6. Describe the structure of forest ecosystem ?
7. Describe the factors affecting environment ?
8. Write about the food chain in ecosystem
11. Write a note on abiotic component of ecosystem ?

Unit – 3 : Natural resources

Q- 1 MCQs

1. Removal of surface soil due to rain is known as _____
(a) Soil conversation (c) **soil erosion**
(b) Soil renovation (d) all of the above
2. sardar sarovar dam is situated on _____ river
(a) **Narmada** (b) tapi
(c) mahi (d) Bhagirathi
3. _____ reduces noise and environment pollution
(a) **forest** (b) land
(c) water (d) sun
4. desert thron forest is found in _____
(a) anand (b) **saurashtra**
(c) valsad (d) none of these
5. _____ is a renewable resources.
(a) coal (b) oil
(c) **water** (d) petrol
6. vehical release _____ in atmosphere.
(a) oxygen (b) **carbon dioxaide**
(c) hydrogen (d) all of these
7. solar energy is _____ in nature.
(a) **renewable** (b) non renewable
(c) man made (d) non of these
8. _____ causes of deforestation .
(a) soil pollution (b) soil erosion
(c) water logging (d) pollution explosion

Q – 2 Short questions :

1. Explains the terms renwables and non rewable natural resources
2. Write any 2 features of land management
3. Write about the different water resources.
4. What is drought ?
5. Write the advantage of dam
6. Define conservation.
7. Enlist on 4 types of forest in Gujarat.
8. Write the effect of deforestation
9. Give the name of any 2 renwable natural resources
10. Define soil erosion & conservation

Q- 3 long questions:

1. Write about the forest type of gujrat.
2. Explain the conversation of natural resources.
3. Write about the classification of natural resources
4. Explain conversation of forest resources
5. What are natural resources ? describe in detail.
6. Solar energy is primary source of energy. Justify which are equipment that run through solar energy ? explain in detail.
7. Uses of forest to human society.
8. Uses and conservation of land resources .
9. Write the major causes of deforestation
10. Give an account of renewable and non renewable natural resources
11. Write the conservation strategies of forest
12. Discuss the benefits and adverse effects of dams.

Unit – 4 :

Q- 1 MCQs

1. Relation between sea anemone & crab is known as _____
(a) **commensalism** (b) competition
(c) predation (d) Antibiosis
2. _____ is a positive interaction.
(a) predation (b) parasitism
(c) **mutualism** (d) all of the above
3. lichen is a _____ biotic interaction
(a) **positive** (b) negative
(c) neutral (d) none of these
4. the term referring to the complete or partial inhibition or death of organism by another & through the production of some harmful substance as a result of metabolic pathway is known as _____
(a) **antibiosis** (b) predation
(c) mutualism (d) commensalism
5. The habitat together with the function of a species is called.
(a) **Niche** (b) Biche (c) crèche (d) none of the above
6. The term “Niche” was first coined by
a) Gauss b) Odum c) **Grinnel** d) Lack

Q- 2 Short question:

- (a) What is symbiosis ?
- (b) Write about parasitism ?
- (c) Explain antibiosis
- (d) Define symbiosis, give example
- (e) What is negative interaction ?

- (f) Give an example of antibiosis
- (g) What are lianas ?

Q- 3. Long questions:

1. What is parasitism ? explain with a suitable example.
2. Write a note on commensalism
3. Discuss predation as a negative interaction ?
4. Write a note on mutualism.
5. Write a note on mycorrhizae
6. What is positive interaction ? write about mutualism with suitable example in detail.
7. Write a note on lianas.
8. Differentiate between commensalism and mutualism
9. Write a note on endocommensalism.

Commensalism is defined as a type of a relationship between two organisms such that one organism receives a benefit from the other organism and the other is neither benefited nor harmed. Commensalism can be of two types. Ecto and endo commensalism. In ecto commensalism, the organism live in a commensal relationship on the exterior of another organism. Colonies of the hydroids, *Hydracintia echinata* stay in the shells of *Pagurus* for shelter. The *Pagurus*, in turn, is unaffected. In endo commensalism, the organism resides inside the host like snail.