

B.Sc. BIOTECHNOLOGY
SPECIAL EXAMINATION
Second Semester
ENVIRONMENTAL STUDIES
(BBT - 201)

Duration: 3Hrs.

Full Marks: 70

Part-A (Objective) =20
Part-B (Descriptive) =50

(PART-B: Descriptive)

Duration: 2 hrs. 40 mins.

Marks: 50

Answer any four from Question no. 2 to 8
Question no. 1 is compulsory.

1. What is biogeographical region? Describe briefly different biogeographical regions of India. (2+8=10)
2. What is biogeochemical cycle? Discuss the nitrogen cycle with suitable diagram. (2+8=10)
3. Explain the process of waste water treatment with proper flow chart and diagram. (10)
4. What is rain water harvestment? Discuss the techniques involved in the process of rain water harvestment. (2+8=10)
5. Differentiate between Global Warming and Climate Change. What is Greenhouse effect? Mention the three main greenhouse gases and their sources. (4+2+4=10)
6. Define Ecosystem. Discuss the structure and function of ecosystem. Give suitable example of food chain in terrestrial and aquatic ecosystem each. (2+6+2=10)
7. Define Biodiversity. Highlight the value of biodiversity. What are major causes of loss of Biodiversity? How many biodiversity hotspots are found in India? (2+3+3+2=10)
8. What is ecological pyramid? Explain different types of ecological pyramid with suitable diagram. (10)

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Duration: 20 minutes

Marks – 20

(PART A - Objective Type)

I. Choose the correct answer:

1×20=20

1. Population of two species may interact in several ways. One of these called proto cooperation occurs when
 - a. One population inhibit the other.
 - b. Interaction is favourable to both but not obligatory.
 - c. Interaction is favourable to both but obligatory.
 - d. Neither population affects the other.
2. Drought is an example of
 - a. Terrestrial hazard
 - b. Cumulative hazard
 - c. Extra terrestrial hazard
 - d. Abnormal hazard
3. Malaria is a
 - a. Water borne disease
 - b. Water based disease
 - c. Water related vector disease
 - d. Water scarcity disease
4. In which of the following regions, O₃ layer depletion is more
 - a. USA
 - b. Asia
 - c. Antarctica
 - d. Arctic
5. In aquatic ecosystem, Periphyton are
 - a. Floating organisms.
 - b. Bottom organisms.
 - c. Attached to other plants.
 - d. Resting or swimming organisms on the surface.
6. Biological treatment is the _____ treatment of waste water.
 - a. Primary
 - b. Secondary
 - c. Tertiary
 - d. None of the above

7. Which is the most largest form of disaster in India?
- Earthquake
 - Flood
 - Landslide
 - Drought
8. National Ambient Air Quantity Monitoring programme was launched in the year ____
- 1972
 - 1984
 - 1987
 - 1992
9. Itai-Itai disease in Japan was caused due to _____ pollution.
- Lead
 - Cadmium
 - Mercury
 - Methyl isocyanide
10. Audibility of human ear ranges from
- 20 – 200 hz
 - 20 – 20000 hz
 - 200 – 2000 hz
 - 20 – 20000 db
11. Ambient Quality Standards for SPM in residential area is ____ mgm.
- 500
 - 200
 - 300
 - None of the above
12. _____ of world primary fuel is shared by oil.
- 20.9 %
 - 38.1 %
 - 25 %
 - 6.3 %
13. Which of the following is a secondary air pollutant?
- O₃
 - PAN
 - H₂SO₄
 - All the above
14. Which of the following constitute biotic factor?
- Intraspecific relationship
 - Biological relationship
 - Community relationship
 - Interspecific relationship

15. Which of the following is the unit of measurement of light?
- Foot candle
 - Candle
 - Torr
 - Pascal
16. Homoiothermic animals –
- Maintain their body temperature same as their body temperature same as that of the environment.
 - Fluctuates their body temperature with fluctuation in environmental temperature.
 - Maintain their body temperature at a constant level irrespective of environmental temperature.
 - None of the above.
17. The interrelationship of all the organisms belonging to producers, consumers and decomposers classes in a given habitat is called
- Food-chain
 - Food-web
 - Food-cycle
 - Ecosystem
18. The energy flow in organisms is-
- Cyclic
 - Unidirectional
 - Radiant
 - None of the above
19. The complexity of any food web depends upon
- Diversity of organisms in the system
 - Variety of population
 - Diversity in gene pool
 - All the above
20. O₃ depletion is caused by the increase in the level of
- Water vapour
 - Chlorofluro carbon
 - Oxygen
 - Carbon monoxide
