REV-01
BOT/15/20

2025/06

SET A

B.Sc. OPERATION THEATRE TECHNOLOGY
SECOND SEMESTER
ENVIRONMENTAL SCIENCE
BOT-204

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 1hr. 30 mins. **Full Marks: 35**

Objective

Time: 15 mins. **Marks: 10**

Choose the correct answer from the following: ***1×10=10***

1. What is one major cause of groundwater depletion?
   a. Rainwater harvesting
   b. Over-extraction for farming and drinking purposes
   c. Excessive use of chemical fertilizers
   d. Building hydropower plants

2. Which of the following is a renewable natural resource?
   a. Solar Energy
   b. Coal
   c. Oil
   d. Natural gas

3. In an ecological pyramid of energy, why is the pyramid always upright?
   a. Because energy is created at each trophic level
   b. Because the number of organisms increases at higher trophic levels
   c. Because energy is lost as heat at each trophic level
   d. Because biomass remains constant across levels

4. Which of the following correctly represents the *second trophic level* in an ecosystem?
   a. Producers like grasses
   b. Primary consumers
   c. Secondary consumers
   d. Decomposers

5. Which of the following is an example of *in-situ* biodiversity conservation in India?
   a. Zoological Park
   b. Nilgiri Biosphere Reserve
   c. SEED Bank
   d. Botanical Garden

6. According to Norman Myers' criteria, for an area to qualify as a biodiversity hotspot, it must:
   a. Have over 50% endemic bird species
   b. Be located near a desert ecosystem
   c. Contain more than 10% marine biodiversity
   d. Have lost at least 70% of its original habitat

7. Which of the following gases is mainly responsible for reducing the oxygen-carrying capacity of blood?
   a. Carbon dioxide
   b. Carbon monoxide
   c. Nitrogen oxide
   d. Methane

8. What is the main cause of eutrophication in water bodies?
   a. Oil spills
   b. Domestic sewage
   c. Algal bloom due to excess nutrients
   d. Thermal pollution

9. Which of the following is a special water treatment used for removing excess fluoride?
   a. Ion Exchange
   b. Reverse Osmosis
   c. Defluoridation
   d. Sedimentation

10. What is the ideal pH range of safe and wholesome drinking water according to WHO guidelines?
   a. 6.5–8.5
   b. 7.5–9.0
   c. 5.5–7.0
   d. 8.0–10.5

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Descriptive

Time : 1 hr. 15 mins. Marks : 25

[Answer question no.1 & any two (2) from the rest]

1. What are the natural resources? Discuss the challenges faced due to population growth. 5

2. What are the different components of ecosystem? Explain the types and importance of Ecosystem. 10

3. What is biodiversity conservation? Explain the value of biodiversity and its type. 10

4. Explain the various types of air pollutants along with their effects on human health and environment. Also mention the control measures of air pollution. 10

5. Define environmental sanitation and mention its major components. Explain the legal aspects and environmental concerns related to water quality. 10

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