

**PG DIPLOMA IN ENVIRONMENTAL MONITORING
& IMPACT ASSESSMENT**

Annual Examination -2010

PGDEMIA-203

Water Quality Monitoring

Max. marks = 70

Time : 2 h 30 min

Attempt all sections.

Section -I

Attempt ALL questions. Each question carries one mark.

(10x1)

1. Lysimeter is –
 - a. an instrument for sampling of soil water.
 - b. an instrument for sampling of gaseous pollutants.
 - c. an instrument for sampling of hydrocarbons.
 - d. None of the above
2. Total hardness is –
 - a. the sum of Ca and Mg concentrations expressed as calcium carbonate in ppm
 - b. the sum of Ca, Mg and Cd concentrations expressed as cadmium chloride
 - c. the sum of Zn and Mg concentrations expressed as magnesium sulphate
 - d. All of the above
3. A warm-water aquatic ecosystem should have a dissolved oxygen (DO) concentration of _____ in order to support diversified biota, including fish.
 - a. at least 5 mg L⁻¹
 - b. at least 10 mg L⁻¹
 - c. at least 15 mg L⁻¹
 - d. at least 20 mg L⁻¹
4. IBI is the -
 - a. Index of Biological Integrity
 - b. Index of Biological Intensity
 - c. International Biological Index
 - d. None of the above
5. Snags include –
 - a. large tree trunk found in the stream channel
 - b. large pieces of bark found in the stream channel
 - c. entire trees found in the stream channel
 - d. All of the above
6. The technology involves treating the industrial effluent using naturally occurring bacteria in soil is called as –
 - a. bioclean technology
 - b. bioorganic technology
 - c. biopure technology
 - d. none of the above

7. DEWATS applications are based on any of the following four basic treatment modules
 - a. Pre-treatment and sedimentation in settlement tank or in septic tank
 - b. Secondary anaerobic treatment in baffled reactors
 - c. Post-treatment aerobic/ anaerobic treatment in reed bed system.
 - d. All of the above
8. For collecting water samples, which of the blank should be taken –
 - a. Field blank
 - b. Equipment blank
 - c. Trip blank
 - d. All of the above
9. The wastewater that generates from the kitchen and bathroom is referred to as –
 - a. greywater
 - b. black water
 - c. brown water
 - d. green water
10. Vermi++, and Sujala are –
 - a. biocatalysts
 - b. wheat varieties
 - c. fungi
 - d. blue green algae

Section –II

Attempt any six questions. Each question carries equal marks. (6x5)

1. Differentiate between temporary and permanent hardness.
2. Differentiate between DO and BOD.
3. Define the Indicator organisms. Give few examples.
4. Describe the process of coagulation and flocculation in water treatment.
5. Write short note on solar ponds.
6. Describe briefly various methods of wastewater treatment.
7. Explain the phenomenon of biological integrity.
8. What are cesspools? Explain briefly.

Section –III

Attempt any THREE questions. Each question carries equal marks. (3x10)

1. Briefly describe the requirement of sampling of polluted water.
2. Describe briefly various methods of wastewater treatment.
3. Describe various stages of water treatment.
4. Write a detail note on biological monitoring of water.
5. Write important parameters which are considered prior to the design and implementation of water monitoring program.