

Unique Paper Code : 2163010013
Name of the Paper : Environmental Biotechnology and Management
Name of the Course : Botany
Semester : VII
Duration : 2 hours
Maximum Marks : 60 Marks

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt any four questions in all.
3. **Question No. 1** is compulsory.
4. Attempt all parts of a question together.
5. Draw well labelled diagrams wherever necessary.

Answer the following questions:

Q1. (a). Define the following (any five) ($1 \times 5 = 5$)

- (i). Acid Rain
- (ii). Biomagnification
- (iii). Up-flow filter
- (iv). Bioaccumulation
- (v). Xenobiotics
- (vi) Biomining

(b). Fill in the blanks (any five) ($1 \times 5 = 5$)

- (i) Phosphate removal from water bodies to prevent eutrophication can be measured using the _____ method.
- (ii) In a sludge tank, the gas mainly produced, is _____
- (iii) _____ is the water that flows from a sewage treatment plant after it has been treated
- (iv) _____ is the increase in the average temperature of the Earth due to the release of greenhouse gases.
- (v) _____ is a neurological disease caused by severe mercury poisoning.
- (vi) _____ is an international treaty designed to protect Ozone layer.

(C). Expand the following (any five) ($1 \times 5 = 5$)

- (i) COD
- (ii) DDT
- (iii) UASB
- (iv) IPCC
- (v) PCB's
- (vi) UNEP

Q2. Differentiate between the following (any three) ($3 \times 5 = 15$)

- (a). Bioaccumulation and Bioconcentration
- (b). Oxidation pond and Activated Sludge
- (c). Biosensors and Bioindicators
- (d). Montreal Protocol and Koyoto Protocol

Q3. Write a short note on the following (any three) ($3 \times 5 = 15$)

- (a). Ozone Layer depletion
- (b). National Environmental Policy
- (c). Anaerobic Digestion
- (d). Bioprospecting

Q4. Draw well labelled diagram of the following (any three) ($3 \times 5 = 15$)

- (a). Trickling Filter
- (b). Biomagnification
- (c). Anaerobic filter
- (d). Bioreactors

Q5. Briefly describe the following (any three) ($3 \times 5 = 15$)

- (a). Greenhouse effect
- (b). Treatment schemes of wastewater of dairy industry
- (c). Biosorption of heavy metals
- (d). State pollution control Boards

Q6. (a) Briefly discuss about the global environmental problems and their management (7.5)

(b) Briefly discuss bioremediation of xenobiotics in environment and their ecological consideration (7.5)