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3. Attempt any two : (7.5×2=15)

(a) Discuss the concept of biomining and bioleaching with examples. Mention two advantages of each.

(b) Elaborate on National Environmental Policy-2006.

(c) Define the term Biodegradation. Write a comprehensive note on biodegradation of petroleum products with suitable examples.

4. Differentiate between the following (any three) : (3×5=15)

(a) Biosensors and Bioindicators

(b) Fluidized bed and fixed bed bioreactor

(c) Trickling filter and Anaerobic filter

(d) Bioconcentration and Biomagnification

5. (a) Enlist any five principles of the Stockholm Conference, 1972. (5)

(b) Explain the principle, working and applications of UASB with suitable diagrams. (10)

(500)

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 3000

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Unique Paper Code : 2164002002

Name of the Paper : Environment Biotechnology and Management

Name of the Course : Botany GE

Semester : III

Duration : 2 Hours

Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Question paper contains **five** questions, Attempt **four** questions in all.
3. Question No. 1 is compulsory.
4. All parts of a question should be answered together.
5. Draw diagrams wherever required.

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1. (a) Expand the following (**any five**) : (1×5=5)

- (i) MoEFCC
- (ii) CPCB
- (iii) VOCs
- (iv) UNFCC
- (v) BOD
- (vi) IUCN

(b) Fill in the blanks (**any five**) : (1×5=5)

- (i) _____ is one of the major gas responsible for greenhouse effect.
- (ii) Rio Earth Summit was held in year _____ .
- (iii) The _____ protocol is an international agreement that aims to protect the ozone layer by reducing the production and consumption of ozone-depleting substances.
- (iv) Activated sludge mostly contains _____ bacteria.
- (v) A molecule that specifically recognize the analyte in a biosensor is known as _____ .

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(vi) The term _____ is used for any chemical or compound that is foreign to a living organism or ecosystem.

(c) Define (**any five**) : (1×5=5)

- (i) Bio-prospecting
- (ii) Oxidation pond
- (iii) Sludge
- (iv) Environmental ethics
- (v) Bioremediation
- (vi) Immobilised enzyme

2. Write short note (**any three**) : (5×3=15)

- (a) Kyoto protocol
- (b) Bioaccumulation of metals
- (c) Acid rain and its harmful effects
- (d) Objectives and role of State Pollution Control Board

P.T.O.