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Roll No.

C533

B.Sc. EXAMINATION, 2020

(Third Semester)

(Main & Re-appear)

(BT)

DBT205

ENVIRONMENTAL BIOTECHNOLOGY

Time : 2½ Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Four* questions in all. All questions carry equal marks.

1. Explain the following briefly (do any *five*) :
 - (i) Green-house gases
 - (ii) Incineration
 - (iii) Bioreactor
 - (iv) Bioleaching
 - (v) Ozone hole
 - (vi) Quorum sensing.
2. (a) Discuss the technique for continuous culture and its uses in environment.
(b) Explain briefly different strategies for cultivation of microorganism from environment air sample.
3. (a) Explain the process of fixing free N_2 to soil by citing suitable examples.
(b) Describe the role of microorganism in maintaining natural and artificial system.

4. What do you mean by Genetic engineering ?
How this technique can be used for degradation of environmental pollutant ?
5. Give description of ruminant microorganism and their role in environment sustainability.
6. Write biological process in details for tannery and waste water effluent treatment with clean sketch.
7. Write short notes on the following :
 - (i) Activated sludge
 - (ii) UV-B
 - (iii) Acid Rain.
8. Discuss bioremediation and its types in details.
Explain, how herbicides from soil can be degraded by biostimulation.

9. (a) Write different novel methods of air pollution control with specific examples.
- (b) How vermicompost would be prepared from household waste products ? Discuss harvesting and benefits of vermicompost in detail.