

3. Describe the role and mechanism of microorganism in the treatment of municipal waste and industrial effluents.

10

4. Discuss any **one** of the following :

1×10=10

- (a) What is symbiotic nitrogen fixation?

Describe the process of nitrogen fixation in detail.

- (b) What is ethanol? How ethanol is produced industrially? Explain the process with labelled diagram.

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D

(Printed Pages 4)

(20425)

Roll No. 8008

B.Sc. (Bio-Tech.) - III Year

Vidushi

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B.Sc. (Bio-Technology)

Examination, April-2025

Environmental Bio-Technology

(B-305)

(B.Sc. Biotech.)

Time : Three Hours]

[Maximum Marks : 75

Note : This paper is divided into **three**

Section-A, B and C. Section-A

contains Very Short answer questions,

Section-B contains Short answer

questions and **Section-C** contains

Descriptive answer questions.

Attempt **all** the sections as per

instructions.

Section-A

(Very Short Answer Type Questions)

Note : Attempt **all** questions. 2×5=10

1/ Write the chemical nature of biogas.

P.T.O.

Name one organism which produce biogas.

2. Giving two examples describing biofertilizers.
3. Explain Phytoremediation with an example.
4. What are the impacts of conventional fuel on environment.
5. Define waste water treatment.

Section-B

(Short Answer Type Questions)

Note : Attempt any **four** questions out of the following **five** questions. $4 \times 5 = 20$

1. Microbes and concept of environment.
2. What is biogas made from? What role can in supplying our energy needs.
3. Pesticidal degradation.
4. Bio-accumulation.
5. Biodegradation of Petroleum.

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Section-C

(Detailed Answer Type Questions)

1. Explain any **one** of the following :

$1 \times 10 = 10$

- (a) What is Bioremediation? Write down the role of microbes in Sewage treatment.
- (b) What are minerals? Describe in brief how microbes are helpful in mineral enrichment?

2. Write a note on any two of the following: $2 \times 7.5 = 15$

- (a) Explain the commercial production of B-thuringiensis.
- (b) What are Biofertilizers? How these are helpful in crop growth? Explain mechanism.
- (c) Discuss about alternative process routes for conversion of lignocellulose to bioenergy products.

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P.T.O.