A **Printed Pages : 3**

(21119) **Roll No. .....**

M.Sc. (Bio-Tech.) III Sem.

NP-3338

M.Sc. (Bio-Tech.) Examination,

November-2019

MICROBIAL, INDUSTRIAL AND ENVIRONMENTAL BIOTECHNOLOGY

(H-301)

M.Sc. (Bio-Tech)

Time : Three Hours] *[Maximum Marks : 50*

Note : Attempt **all** questions in **Section–A, two** questions from **Section–B** and **three** questions from **Section–C.**

Section–A

1. Write short notes on following : 5×2=10
   (i) Hazardous waste.
   (ii) Weed control and herbicides.
   (iii) Growth curve in Microbes
   (iv) Define Antibiotics. Name three antibiotics
   (v) Biofertilizers

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Section–B 5×2=10

2. (i) Sterilization techniques in 'Microbes'.
   (ii) Draw labelled diagram of two fermenters.
   (iii) Write basic steps involved in producing single cell proteins (SCP).
   (iv) Write biotechnical advances in control of pollution through GEMs

Section–C 10×3=30

3. What is 'Sewage' ? Mention the role of Micro-organisms in decomposition of sewage and other waste materials.

4. How is Enzyme 'Pectinase' produced ? What are the uses of PECTINASES.

   or

   How are Enzyme Lipase and proteases produced ? What are their applications ?

5. Give the diagram for commercial production of 'GLYCEROL' and Explain.

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6. What do you know about "Probiotic foods". Explain in detail laking at least three examples of probiotic food.

7. What is pollution ? What role microbes can play in controlling the pollution.

or

What is Biodegradation and Bioremediation what is the role of Microbes in this process ?