

Microbiology [Honours]

[CBCS]

B.Sc. Fifth Semester End Examination-2023

(Regular & Supplementary Paper)

PAPER-DSE1T

Full Marks: 40

Time: 02 Hrs

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

Group A

1. Answer any FIVE questions of the following: 5x2= 10

- a. What types of microorganism involved in biogas production?
- b. Write the advantages of cell immobilization.
- c. Write the basic principle to remove the heavy metals from water using microbes.
- d. Define with example of CBRs and CBSs.
- e. What are carrier matrices? Give example. 1+1
- f. What is recombinant vaccine? Give example. 1+1
- g. What is Service Marks? What do you mean by TM, SM and ® ?
- h. What can be protected by copyright?

(2)

Group B

2. Answer any **FOUR** questions of the following: **4x5 = 20**
- a. Briefly describe the process to formation of Cocoa butter. 5
 - b. Write the production Process of HFCS and its application. 3+2
 - c. Write the biotransformation methods of steroid and sterols. 5
 - d. Briefly describe the basic mechanism of action of PGPB and PGPF. 2.5+2.5
 - e. Write the criteria of granting patent. 5
 - f. What are the essential features of trademark? How RNAi technique employed to extend the shelf life of tomato? 2.5+2.5

Group C

3. Answer any **ONE** question of the following: **1x10 = 10**
- a. What is a recombinant vaccine? Write the process to production of recombinant Hepatitis B vaccine. Write the biochemical reaction to recovery of copper from its ores. 2+4+4
 - b. Answer short note on
 - i. Microbial streptokinase production (flowchart)
 - ii. Xenobiotics
 - iii. Microbial biosensor
 - iv. Ion exchange chromatography. 4x2.5
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