2022

Microbiology

[HONOURS]

(CBCS)

(B.Sc. Fifth Semester End Examination-2022)

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

[Microbial Biotechnology]

Group-A

Answer any five questions of the following: **5x2=10**

1. Write down the applications of dextran. 2
2. Define recombinant vaccine. 2
3. What is intellectual property Right (IPR)? 2
4. Write on the generationof biodiesel. 2
5. Write the advantage of bioethanel over petrol. 2
6. What is bioaugmentation? 2
7. What is Cocoa butter atternatives? Give example. 1+1
8. Write down the source of row materials to production of biodiesel. 2

Group-B

Answer any four questions of the following: **4x5 = 20**

1. a) Write down the general steps for recombinant Hepatitis B vaccine production

   b) What is the difference between biopesticide and chemical pesticide. 3+2

2. a) Write down the role of 'Dicer' and 'RISC' in RNA interference.

   b) Write down the role of RNAi in antiviral responses. 3+2

3. a) State the basic mechanism for degradation of any one xenobiotics compound using microorganism. 5

4. Write down the process of microbial product-purification by filtration and affinity chromatographic methods. $2\frac{1}{2}+2\frac{1}{2}$

5. What are bioplastics? Briefly describe anyon bioplastic 1+4

6. Compare various methods of immobilization 5

Group –C

Answer any one question: **1x10 = 10**

1. Write down the role of GM-bacteria in agriculture. Describe the production of process of xanthan with a process diagram. Write a short note on PGPR. 3+4+3

2. Write down the three stage fermentation system for the production of sterol. Diagrammatically represent the production of HFCS-90 and cocoa butter. 3+3+4
