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PG Even Semester (CBCS) Exam., May—2018

MICROBIOLOGY

(2nd Semester)

Course No. : MIBCC–204

(Microbial Enzyme Technology)

Full Marks : 70
Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

Answer **five** questions, taking **one** from each Unit

UNIT—I

1. Discuss the various stages involved in large-scale production of enzymes. 14

2. Write short notes on the following : 7×2=14

(a) Column chromatography

(b) Protoplast fusion

UNIT—II

3. What is an enzyme immobilization? Discuss the immobilization criteria of an enzyme. Describe physical methods of enzyme immobilization with diagrams. 14

4. Write short notes on the following : 7×2=14

(a) Reverse micellar entrapment

(b) Kinetics of immobilized enzyme

UNIT—III

5. Discuss the use of enzyme in the manufacture of chemicals. 14

6. Write short notes on the following : 7×2=14

(a) Enzyme electrodes

(b) Enzyme in food and drink industry

UNIT—IV

7. What are biopesticides and how do they work? Elaborate mode of action and specificity of *Bacillus thuringiensis* toxin in the control of caterpillars larvae. 14

8. Write short notes on the following : 7×2=14

(a) Antibiotics

(b) Bio-polymers

UNIT—V

9. Write a note on different types of microbial toxin. Discuss the chemical nature and mode of action of exotoxin and endotoxin. 14

10. Write short notes on the following : 7×2=14

(a) Genetically engineered microbes and their application in industry

(b) Anti-cancer compounds and their mode of action

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