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MVP-006

**M. SC. (FOOD SAFETY AND
QUALITY MANAGEMENT)**

[M. SC. (FSQM)]

Term-End Examination

December, 2025

MVP-006 : FOOD BIOTECHNOLOGY

Time : 3 Hours

Maximum Marks : 100

Note : (i) Attempt any **five** questions.

(ii) All questions carry equal marks.

1. Write notes on the following (any **four**) :

4×5=20

- (a) Blue Biotechnology
- (b) Gold Biotechnology
- (c) Single cell protein
- (d) Biocolours
- (e) Biogums

2. (i) Explain the importance of food biotechnology in food safety. 10
- (ii) Identify *six* groups of enzymes. Explain the mechanism of action of enzymes. 10
3. (i) Describe enzyme assisted bio-remediation of food waste. 10
- (ii) Explain the basic principle of recombinant DNA technology. 10
4. (i) Discuss in detail the PCR. 10
- (ii) State the procedures for introduction of recombinant DNA into host cell. 10
5. (i) Give a schematic overview of industrial fermentation process. Enumerate the metabolites of fermentation process. 10
- (ii) Describe the basic design of bioreactor and its types. 10

[3]

6. Explain the biotechnological method for production of natural flavors and vitamins.

20

7. Mention the advantages of GM crops. What are the steps involved in production of GM crops ?

8+12

x x x x x