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MVP-006

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

Term-End Examination

June, 2024

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*) : $4 \times 5 = 20$
 - (i) Restriction end nuclease
 - (ii) Biocolours
 - (iii) Single cell protein
 - (iv) Transgenic animal
 - (v) Biofuel production

2. (i) Explain the importance of biotechnology in food safety. 10

- (ii) Give the basic steps and applications of recombinant DNA technology. 10

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3. (i) Describe the structural components of a bioreactor with the help of a diagram. 10
(ii) Explain the production of any one alcoholic beverage along with a flow diagram. 10
4. (i) Discuss the development of water soluble vitamins with the help of biotechnology. 10
(ii) Write the functional properties and applications of biogums. 10
5. (i) Describe the structure of enzymes and give their classification. 10
(ii) How are food crops improved by genetic engineering ? 10
6. Discuss the biotechnological interventions in food waste utilization. Write a note on green biotechnology. 15+5
7. What are the advantages of GM crops ? Describe the steps involved in production of GM crops. 5+15