

11403

LMDQ/M-24

FOOD BIOTECHNOLOGY

Paper : BT-401

Time : Three Hours]

[Maximum Marks : 80

Note : The candidates are required to attempt Question No. 1 (Compulsory) and *four* others, selecting *one* question from each unit. All questions carry equal marks.

Compulsory Question

1. (a) Describe the function of enzyme produced by crt gene in production of Golden rice. 1
- (b) What is the full form of RDAC and SBCC committees involved in regulation of GM crops in India? 2
- (c) Describe the deactivated yeast. 2
- (d) Describe the importance of addition of oxidizing and reducing agents to the flour. 4
- (e) Describe levels of food packaging with suitable examples. 3
- (f) Write a note on ISO. 4

UNIT-I

2. (a) Write the nutritional values and types of different microbes used as SCP. What are the advantages and limitations of SCP? 8

- (b) Discuss the mushrooms spawn production. 5
- (c) Discuss harvesting and drying of algal mass. 3
- 3. (a) Discuss various aspects of safety of GM food crops. 10
- (b) Describe the modifications of fructans in plants through transgenic approach and their significance. 6

UNIT-II

- 4. Discuss in details various food preservation techniques. 16
- 5. Discuss in details about the following :
 - (a) Flavouring agents. 8
 - (b) Colouring agents. 8

UNIT-III

- 6. (a) Write about the cheese production technologies. 8
- (b) Discuss the Indian fermented foods produced using cereal and legumes. 8
- 7. Describe different types of packaging materials and their functioning properties. 16

UNIT-IV

- 8. Write note on the following :
 - (a) Fruit Products Order (FPO). 4
 - (b) Cold Storage Order (CSO). 4

- (c) Role of AGMARK. 4
- (d) Role of BIS. 4

9. What are the types of adulterants and reasons for food adulteration? Describe methods of evaluation of food adulterants in vegetables, turmeric, saffron and milk. 16
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