TM254730U

Reg. No :.....

Name :.....

MASTER'S DEGREE (C.S.S) EXAMINATION, MARCH 2025

2020, 2021, 2022 ADMISSIONS SUPPLEMENTARY

FOOD SCIENCE & NUTRITION SEMESTER IV - ELECTIVE COURSE

FN4E01TM20 - Food Biotechnology

Time : 3 Hours **Maximum Weight : 30**

Part A

I. Answer any Eight questions. Each question carries 1 weight **(8x1=8)**

1. Comment on ELSI in Biotechnology.
2. Give an example of improving palatability of crops using biotechnology.
3. Define GM foods.
4. Enlist applications of PCR.
5. Describe the various drying methods used in downstream processing of biomolecules.
6. What are the types of bioreactors?
7. Write a short note on Miso.
8. Explain the mechanisms of probiotic activity.
9. Explain hydrolytic reactions in detoxification of xenobiotics with suitable examples.
10. Enlist the factors affecting detoxification of drugs.

Part B

II. Answer any Six questions. Each question carries 2 weight **(6x2=12)**

11. Briefly describe the term 'Intellectual Property Rights' in Biotechnology.
12. Briefly summarise major events in Phase 1 of evolution of biotechnology.
13. What are the types of plant culture media?
14. Illustrate the application of enzymes in fruit and vegetable industry.
15. Describe production of lipids by biotechnology.
16. Describe the general steps in the meat fermentation process.
17. Elaborate on Mushroom cultivation.
18. Describe conjugation reactions in the biotransformation of xenobiotics.

Part C

III. Answer any Two questions. Each question carries 5 weight **(2x5=10)**

19. Analyse the importance of IPR in various aspects of Biotechnology research.
20. Give an overview of the process of Cloning with suitable examples. Add a note on the ethical concerns in animal cloning.
21. What are the various steps in downstream processing? Explain them in detail with a neat schematic diagram.
22. Describe the mechanism of vinegar production.