Avinashilingam Institute for Home Science and Higher Education for Women

(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)
Re-accredited with 'A+' Grade by NAAC. Recognised by UGC Under Section 12B
Coimbatore - 641 043, Tamil Nadu, India

Master's Degree Examination – June / July 2021
II Semester

Class : I PG **Time : 3 Hours**
Major : Food Science and Nutrition **Max. Marks: 100**

20MFNC08 Food Biotechnology

PART A **10 x 1 = 10**
Choose the Correct Answer

1. Identify the first transgenic plant produced in the world. CO1K1
   a. Rice b. Tobacco c. Wheat d. Cotton

2. Select the most suitable vector CO1K1
   a. Yeast b. Mold c. Algae d. Bacteriophage

3. Name the substance which is used as nitrogen source in a fermenter CO2K1
   a. Peptone b. Cornstarch c. Molasses d. Sugars

4. Recognise the phase in which maximum growth takes place in batch culture CO2K1
   a. Lag phase b. Log phase c. Stationary phase d. Decline Phase

5. Infer which of the following is used for the development of several plantlets CO3K2
   a. Callus b. Inoculum c. Clone d. Plasmid

6. In which of the following production is the term "Spawning" associated? CO3K2
   a. Spirulina b. Chlorella c. Mushroom d. Yeast biomass

7. Select the enzyme that is used in the conversion of glucose to fructose CO4K2

   a. Amylase b. Lactase
   c. Glucose isomerise d. Fructose isomerase

8. Identifythe organism that is used in the production of Citric acid CO4K2
   a. *Saccharomyces* b. *Pseudomonas* c. *Clostridium* d. *Aspergillus*

9. Which of the following is not a major detoxification reaction in Phase-1? CO5K1
   a. Hydrolysis b. Acetlyation c. Oxidation d. Reduction

10. Nanoparticles from biologically processed metal ores is used in the manufacture of _____ CO5K1

    a. Homeopathic medicines b. Cosmetics
    c Antibiotics d. Ayurvedic medicines

Part B **5 x 6 = 30**

Answer ALL questions
Each answer should not exceed 400 words or two pages

11.a. Demonstrate the use of endonuclease in genetic engineering	CO1K3
(or)	
11.b. Write on the use of plasmids as cloning vectors.	CO1K3
12.a. Explain downstream process.	CO2K4
(or)	
12.b. Outline the use of enzymes in food industries.	CO2 K4
13.a. Write a note on transgenic plants	CO3K3
(or)	
13.b. Explain how single cell proteins are used for production of food colour and flavour.	CO3K3
14.a. Appraise on the production thickeners and gelling agents	CO4K4
(or)	
14.b. Illustrate the production of cheese.	CO4K4
15.a. List and explain the components of xenobiotics	CO5K3
(or)	
15.b. Write a note on nutrigenomics	CO5K3

Part C **5 x 12 = 60**

Answer ALL questions
Each answer should not exceed 800 words or four pages

16.a. Describe about the scope and importance of biotechnology	CO1K2
(or)	
16.b. Discuss about the steps and applications of gene cloning	CO1K2
17.a. Write on i. Fermentation systems ii. Structure of a fermenter	CO2K3
(or)	
17.b. Illustrate the methods and applications of immobilised enzymes	CO2K3
18.a. Demonstrate the techniques and requirements of Animal tissue culture	CO3K3
(or)	
18.b. Sketch the production of spirulina and yeast biomass	CO3K3
19.a. Explain the production of i. High Fructose Corn Syrup ii. Methionine	CO4K3
(or)	
19.b. Write on the industrial manufacture of citric acid and wine.	CO4K3
20.a. Explain about the metabolism of xenobiotics	CO5K4
(or)	
20.b. Explain about the safety aspects of foods produced by biotechnology .	CO5K4

******