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 : Bioinformatics **Max Marks : 100**

20MBTI01 IDC- Prospects of Biotechnology
Part-A
Choose the Correct Answer **10X1 = 10**

1. The process of weakening a pathogen is called CO1K1
   a. Vaccination b. attenuation
   c. immunization d. inactivation

2. The first recombinant antigen vaccine approved for human use is CO1K1
   a. DPT vaccine b. Var vaccine
   c. Hib vaccine d. Hepatitis B vaccine

3. Cry genes or Bt genes are obtained from CO2K2
   a. Cotton pest b. Tobacco plant
   c. Bacillus thuringensis d. Coli

4. Bioscouring is a process to remove CO2K3
   a. Odour b. impurities
   c. dye d. None of the above

5. Which of the following terms defines the process of silk production CO2K2
   a. Moriculture b. Sericulture
   c. Both a & b d. None of the above

6. Which of the following is probiotic CO3K3
   a. *Bifidobacterium* b. *Lactobacillus* species
   c. Yogurt d. All the above

7. The introduction of remedial gene to bone marrow cells comes under CO4K3
   a. germ line therapy b. somatic cell therapy
   c. both a & b d. Corrective gene therapy

8. A blastocyst is CO4K2
   a. a type of stem cell c. a very early stage of embryo
   b. a type of brain cell d. None of the above

9. Which of the following plant cells shows totipotency CO5K2
   a. Sieve tube b. Xylem cells
   c. Meristem d. Nodal cells

10. The optimal temperature required for vermicomposting is CO5K4
    a. 15ºC to 20 ºC b. 25ºC to 30 ºC
    c. 30ºC to 35 ºC d. 35ºC to 40 ºC

Part- B **5×6=30**

Answer the following

Answer should not exceed 400 words or two pages

11.a. Explain the functions of human growth hormone.	CO1K1
(or)	
11.b. Write notes on ELISA technique for disease diagnosis.	CO1K3
12.a. Explain the purpose of producing transgenic cotton? Add a note about its advantages.	CO2K3
(or)	
12.b. Discuss the role of chitin and chitosan in textile industry.	CO2K2
13.a. Discuss the role of probiotics for maintaining healthy gut microbiome. with suitable examples	CO3K3
(or)	
13.b. Discuss the applications of nutrigenomics in prevention of some diseases.	CO3K2
14.a. Discuss the production of secondary metabolites in plant tissue culture.	CO4K3
(or)	
14.b. Discuss the production of biopolymers from plants.	CO4K3
15.a. Differentiate bioremediation and phytoremediation with suitable examples.	CO5K2
(or)	
15.b. Write notes on vermicomposting.	CO5K3

Part - C **5 x 12 = 60**

Answer ALL questions

Each answer should not exceed 800 words or four pages

16.a. Explain the production of monoclonal antibody in detail.	CO1K2
(or)	
16.b. Discuss the types of vaccines and its applications in health care.	CO1K3
17.a. Discuss about the various enzymes used in textile finishing.	CO2K3
(or)	
17.b. Explain about the biotechnological methods for the production of natural fibres.	CO2K3
18.a. Discuss in detail about the functional foods in promoting human health.	CO3K3
(or)	
18.b. Write a detailed note on the role of prebiotics in human health	CO3K2
19.a. Discuss in detail about the production of edibile vaccines in plants	CO4K2
(or)	
19.b. Describe in details about the types of stem cells and its applications	CO4K2
20.a. Discuss in detail about gene therapy and its applications.	CO5K3
(or)	
20.b. Summarize the process involved in dye degradation in textile industry.	CO5K4

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