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 2021
IV Semester

Class : II M.Sc. **Time: 3 Hours**
Major : Bio textiles **Max. Marks: 100**

17MBXC21 Microbiology and Bioprocess Technology

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

1. Prokaryotes do not have C01 K1
   a. Nucleus b. Chromosome c. Nucleoid d. All the above

2. Microbiology is the study of C01 K1
   a. Algae b. Bacteria c. Fungi d. All the above

3. Bacterial growth is proliferation of bacterium and the process is known as C02 K1
   a. Binary fusion b. Binary fission c. Culture d. Binary culture

4. Select the nutrient required for microbial growth C02 K1
   a. Nitrogen b. Carbon c. Calcium d. All the above

5. Identify the culture media in which Agar is used C03 K1
   a. Liquid media b. Solid media c. Semisolid media d. All the above

6. The common method for isolation of a pure culture from a mixture is C03 K1
   a. Pour plate b. Streak plate c. Spread plate d. Basal media

7. A culture of microorganism maintained solely for keeping the microorganism viable by subculture C04 K1
   a. Physical culture b. Chemical culture
   c. Functional culture d. Stock culture

8. Identify the component that must be present in a culture media C04 K1
   a. Amino acid b. Vitamins c. Carbon d. All the above

9. The technique used for separation of particles from a solution by spinning in a rotor is C05 K2
   a. Filtration b. Precipitation c. Centrifugation d. liquid extraction

10. Chromatography is a technique for C05 K1
    a. Purification b. separation of a mixture
    c. Microbial growth d. Assay

Part B **5 x 6 = 30**

Answer ALL questions

Each answer should not exceed 400 words or two pages

11.a. Trace the history and cite the scope of microbiology.	C01 K2
(or)	
11.b. Explain about light microscope.	C01 K2
12.a. List and explain the common nutrient requirements for microbes.	C02 K2
(or)	
12.b. Explain about measurement of microbial growth.	C02 K2
13.a. Describe about the maintenance of pure culture.	C03 K2
(or)	
13.b. Enumerate the various methods of isolating pure cultures.	C03 K1
14.a. Report on stock culture.	C04 K2
(or)	
14.b. Explain about sterilisation and decontamination of fermentation media.	C04 K2
15.a. Describe centrifugation and cell disruption.	C05 K2
(or)	
15.b. Outline about chromatography and crystallization.	C05 K4

Part C **5 x 12 = 60**

Answer ALL questions

Each answer should not exceed 800 words or four pages

16.a. Represent the cell structure and function of fungi.	C01K2
(or)	
16.b. Explain electron microscope -its transmission and scanning.	C01 K2
17.a. Represent the physical and chemical methods of microbial control.	C02 K2
(or)	
17.b. Explain about growth curve and influence of environmental factors on microbial growth.	C02 K2
18.a. Point out the types of culture media and explain.	C03 K4
(or)	
18.b. Summarise about culturing of aerobic and anaerobic microbes.	C03 K2
19.a. Explain about detection, physical and chemical assay of fermentation products.	C04 K2
(or)	
19.b. Summarise about media composition and inoculum preparation.	C04 K2
20.a. Summarize downstream processing.	C05 K2
(or)	
20.b. Explain about removal of microbial cells and solid matter.	C05 K2

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