



Avinashilingam Institute For Home Science And Higher Education For Women,
Coimbatore-641043

Semester-IV

Continuous Internal Assessment test II- April 2025

Class: II UG

Max.Marks : 60

Major: Biochemistry/Biotechnology

Time : 2 hours

23BBTC04 Microbiology and Industrial Fermentation

CO1: Appreciate the principle of various microscopes and their utility in microbiology

CO2: Gain an insight into the classification of microorganisms and their ultrastructures

CO3: Acquire the theoretical knowledge for the various methods used in microbiology

CO4: Understand the methods used in the control of microorganisms and various pathogenic diseases

CO5: Acquire knowledge of food microbiology, packaging and fermentation industry

Part-A

6x1=6

Answer the following

Circle the correct answer

1. Which of the following is a set of bacterial diseases? CO4K3
a) Malaria, poliomyelitis, mumps b) Mumps, cholera, typhoid
c) Plague, Leprosy, Diphtheria d) Measles, Tuberculosis, Tetanus
2. Widal test is used for the susceptibility of CO4K4
(a) Typhoid (b) Cholera (c) Malaria (d) Cholera
3. Which type of fermentation process allows for the continuous addition of fresh media and removal of spent media? CO5K2
a) Batch fermentation b) Fed-batch fermentation
c) Continuous fermentation d) Static fermentation
4. The temperature of liquid nitrogen is CO5K3
a) -20°C b) -80°C c) -196°C d) 4°C
5. Penicillin is recovered as ----- after the fermentation process CO5K2
a) Penicillin b) Sodium penicillin
c) Calcium penicillin d) Potassium penicillin
6. Which of the following is not an edible mushroom? CO5K1
a) *Agaricus bisporus* b) *Amanita phalloides*
c) *Grifola frondosa* d) *Pleurotus ostreatus*

Part-B

3x6=18

Answer the following

7. a. Differentiate between batch, continuous and fed-batch fermentations CO5K3
Or
7. b. Write about the various components of a bioreactor with a diagram CO5K2
8. a. Give a detailed account on single cell protein production CO5K2
Or
8. b. Explain the mechanism by which vinegar acts as a preservative in food CO5K2
9. a. How does the dengue virus spread from person to person? CO5K2
Or
- 9 b. Write a short account on the different types of bioreactor CO5K3

Part C

3x12=36

Answer the following

- 10 a. Discuss the steps involved in screening of industrially important microorganism CO5K2
Or
10. b. Discuss the various steps involved in product recovery of a primary metabolite CO5K3
11. a. Give a detailed account on non- alcoholic beverages CO5K2
Or
11. b. Outline the process involved in mushroom cultivation CO5K2
12. a. Elaborate on any two types of bacterial diseases CO5K3
Or
12. b. Describe the steps involved in kefir and cheese production CO5K2

Staff-in-charge: Dr.D.Kavitha&Dr.K.V.Shalini

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