



**KERALA AGRICULTURAL UNIVERSITY**  
**B.Tech.(Food Technology) 2022 Admission**  
**III Semester Final Examination – February 2024**

Pafe.2112

**Industrial Microbiology (2+1)**

**Marks: 50**  
**Time: 2 hours**

**I Fill in the blanks (10x1=10)**

1. .... and ..... are common amino acids that are major industrial products of microorganisms.
2. Vessels used for industrial fermentation are called .....
3. The best medium for the production of Penicillin is .....
4. Overheating of fermentor during fermentation is controlled by .....
5. The purification and recovery of the production after fermentation is called .....

**State True or False**

6. Industrial microbiology does not contribute to the field of bioremediation.
7. Probiotics can improve the immune system by promoting the production of antibodies.
8. UV-radiation is an effective technique for sterilizing liquids and gases but is less effective on surfaces.
9. Bioreactors are incapable of producing biofuels.
10. Bacteriocins are type of antibiotic produced by fungi.

**II Write short notes on ANY FIVE of the following (5x2=10)**

1. Serial dilution method
2. Characteristics of Primary metabolites
3. Canning
4. *Penicillin*
5. Incineration
6. Amylase
7. Yogurt

**III Answer ANY FIVE of the following (5x4=20)**

1. Discuss the ecological role of secondary metabolites in microbial communities.
2. Comment on irradiation technique.
3. Write a brief account on citric acid and its applications.
4. Write a short note on SMF.
5. Comment on the production of lactic acid.
6. Upstream processing
7. Vitamin B12 and its applications

**IV Write an essay on ANY ONE of the following (1x10=10)**

1. Write a detailed account on preservation of industrially important microorganisms.
2. Explain in detail on fermented foods and its importance.

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