



KERALA AGRICULTURAL UNIVERSITY
B.Tech.(Food Technology) 2021 Admission
III Semester Final Examination – February 2023

Pafe.2112

Industrial Microbiology (2+1)

Marks: 50
Time: 2 hours

- I Fill in the blanks (10x1=10)**
1. Preservation of microorganisms in liquid nitrogen is termed as _____.
 2. Pasteurization is _____ method of sterilization.
 3. _____ technique is employed for detecting microorganisms able to produce growth factors, vitamins, amino acids etc, extracellularly.
 4. _____ is a closed culture system which contains limited amount of nutrients.
 5. Microorganisms that have beneficial effect on host intestinal microbial balance is termed as _____.
- Define**
6. Thermal death time
 7. Secondary metabolites
 8. Bacteriocins
 9. Ion exchange chromatography
 10. Lyophilization
- II Write short notes on ANY FIVE of the following (5x2=10)**
1. List out the objectives of preservation.
 2. Methods of preservation
 3. Methods of sterilization
 4. Nisin
 5. Types of cell disruption methods
 6. Differentiate solid state fermentation and submerged fermentation.
 7. Mode of action of probiotics
- III Answer ANY FIVE of the following (5x4=20)**
1. Components of a fermenter
 2. Production of microbial enzymes
 3. Importance and beneficial effects of probiotics
 4. Types of chromatography for product purification
 5. Sterilization charts
 6. Screening of microbes
 7. Mechanical cell disruption
- IV Write an essay on ANY ONE of the following (1x10=10)**
1. Preservation of microorganisms
 2. Industrially important metabolites and microorganisms involved
