

**School of Biomedical Science****Master of Science in Medical Biotechnology  
Semester End Examination - Jun 2024****Duration : 180 Minutes  
Max Marks : 100****Sem II - Q1PP203T- MBAMTT2004 - Microbial Technology***General Instructions**Answer to the specific question asked**Draw neat, labelled diagrams wherever necessary**Approved data hand books are allowed subject to verification by the Invigilator*

- 1) Define how does the utilization of sucrose as a carbon source influence the production of specific amino acids by microbial cultures? K1(2)
- 2) Explain Industrial applications of Steroid Biotransformation. K2(4)
- 3) Explain Industrial production of anthracyclines, optimization strategies, and their applications in cancer treatment. K2(6)
- 4) Illustrate Single Cell Biomass characteristics, Production Strategies, and Applications in Biotechnology. K3(9)
- 5) Illustrate Production and Applications of Penicillin Acylases: Industrial Processes, Optimization, and Biotechnological Significance. K3(9)
- 6) Examine Industrial Production of Amino Acid Antibiotics: Processes, Optimization, and Applications. K5(10)
- 7) Analyze Industrial Production of Lipases: Processes, Optimization, and Applications. K4(12)
- 8) Examine the factors that influence the efficiency and productivity of ethanol production using immobilized yeast culture. K5(15)
- 9) Examine the doubling time of the culture if population of a bacterial culture is increased from one thousand to one billion in 5 hours. K5(15)
- 10) Determine if a bacterium having doubling time of 10 min, fills a cylindrical vessel completely in 3 hours. How much time will it take to fill half of the vessel ? K6(18)