

Date
27/12/2022

Exam.Code:0001

Sub. Code: 0084

2122

B.A./B.Sc. (General) First Semester

Industrial Microbiology

IMB-101: Fundamentals of Microbiology - I

Time allowed: 3 Hours

Max. Marks: 33

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting one question from each Unit.

x-x-x

1. Answer the following (Compulsory):

- What are the applications of dark field microscopy.
- Draw the pattern of microbial death.
- Define diauxic growth.
- How bacteria sporulate.
- Enlist various chemical methods to control microbial growth.
- Define electron transport chain.

(6x1.5)

UNIT-I

- (a) Describe scope of industrial microbiology in food sector.
(b) Discuss the role of microorganisms in development of fermentation technology at industrial level. (3,3)
- (a) Differentiate between TEM and SEM.
(b) Write a note on new technologies in the field of microscopy. (2,4)

UNIT-II

- (a) What is synchronous growth. How it can be achieved.
(b) Give an account of pattern of bacterial growth in a batch system. (3,3)
- Enlist various conventional and rapid methods to measure microbial growth. Discuss any two in detail. (6)

UNIT-III

- (a) Describe SOP for good microbiological laboratory practices.
(b) Explain the most efficient method of moist heat sterilization. (3,3)
- Explain mechanism of action of any three chemical antimicrobial agents. (6)

UNIT-IV

- How nutrients are transported through passive and active transport systems in microbial cells. (6)
- Write short notes on:
(a) Photosynthetic microbes
(b) Photorespiration process (3,3)

x-x-x