

C.H.D-31 - 2/12/2023 (monday)

Exam.Code:0001

Sub. Code: 0084

2123

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 briefly:

- Define synchronous growth.
- What is plasmolysis?
- What is the difference between TEM and SEM images?
- What is the importance of Yeast in industries?
- Define GLP?
- Name the acid present in endospores.
- Who is the father of Fermentation microbiology?
- What is the principle of moist sterilization?
- Which bacteria use Sulphur as a source of electron donor? Name any two.

(1x9=9)

UNIT-I

- What are the applications of microbiology in the modern world? Discuss.
 - Describe the role of microbes in the development of industrial microbiology.
- How the specimens are prepared and stained for visualization under the microscope.
 - Give a comparison of bright field and phase contrast microscope.

(3+3=6)

(3+3=6)

UNIT-II

- Explain the procaryotic cell cycle in detail.
 - How the endospores germinate? Which factors favor their germination?
- What do you know about the Chemostat? Give its applications.
 - Which methods will you use for measuring the growth of given bacteria?

(3+3=6)

(3+3=6)

UNIT-III

- Discuss the mode of action of physical antimicrobial agents commonly preferred in the microbiology laboratory.
 - Explain the safety measures to be followed in microbiology laboratory.
- Write a note on the following:
 - Pattern of microbial death
 - Chemical antibacterial agents

(3+3=6)

(3+3=6)

UNIT-IV

- How nutrients are transported in bacterial cells? Explain any two methods.
 - Discuss the process of Photophosphorylation.
- What do you know about the Calvin Cycle? Explain.
 - Discuss the role of cell membranes in microbial physiology with examples.

(3+3=6)

(3+3=6)

X-X-X