

Ref. No. : Ex/FTBE/BS/B/T/212/2024(S)

B.E. FOOD TECHNOLOGY AND BIO-CHEMICAL ENGINEERING SECOND YEAR FIRST SEMESTER SUPPLEMENTARY EXAM– 2024

Subject : BASICS OF MICROBIOLOGY

Time: 3hr

Full Marks: 100

Part I (Total Marks 50)

Instructions : Use Separate Answer scripts for each part

Answer any five questions from the following: 5x10=50

1. Classify bacteria based on oxygen requirement. 10
2. What do you mean by obligate parasites? What is the role of Peptone, Beef extract, Yeast extract and agar in bacterial medium? 2+8=10
3. How the cell wall of Gram positive bacteria differs from Gram negative bacteria? What is the difference between protoplast and spheroplast? 5+5=10
4. Write about the economic importance of algae. How microbial cultures are maintained by long term methods -explain any one method. 4+6=10
5. Draw and explain the structure of a bacteriophage. Write the difference between lytic and lysogenic cycle of virus. 5+5=10
6. Write the difference between
 - a) Solid and semi solid medium 3
 - b) Synthetic and non-synthetic media 3
 - c) Draw a bacterial growth curve and explain it. 4

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YEAR FIRST SEMESTER SUPPLEMENTARY EXAM - 2024

Basics of Microbiology

Time: 3hours

Full Marks: 100

Part II (Marks 50)

Answer Q1 and any three (Q2 –Q5) questions from the following: 4x5+ 3x10

1. Explain the following: 4x5
 - a) Picric acid is not a chromogen but a dye .
 - b) Arnold sterilizer.
 - c) Symbiotic nitrogen fixation.
 - d)Chlorine acts as disinfectant.

- 2a)Define with example dye, disinfectant, mordant, differential staining.
 - b) How does composition of cell wall affect gram staining? 4x1.5+4

- 3.Explain sterilization and pasteurization. How does moist heat act on microorganisms? 7+3

4. What is meant by phenol coefficient? Explain evaluation of antimicrobial chemical agent by phenol coefficient method. 3+7

5. Write short notes on (any two) : 2x5
 - a.simple staining
 - b.Compound Microscope
 - c . Autoclave