

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)**

**CLASS: BPHARM
BRANCH: PHARMACY**

**SEMESTER: III
SESSION: MO/2022**

SUBJECT: BP303T PHARMACEUTICAL MICROBIOLOGY

TIME: 3.00 Hours

FULL MARK: 75

INSTRUCTIONS:

1. The missing data, if any, may be assumed suitably.
 2. Before attempting the question paper, be sure that you have got the correct question paper.
 3. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
 4. This question paper consists of (03) three parts. Read the part wise instructions before attempting the questions.
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PART-I

Objective types questions (Instruction: Answer all questions)

- Q1. (10 x 2 = 20 Marks)
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| A. What are the different methods of enumeration of microorganisms? | CO1 |
| B. Compare the functions of fimbriae with pilli and Capsule with Slime layer. | CO1 |
| C. Indicate the nomenclature of industrial microorganisms which are generally procured in India ? | CO1 |
| D. What is the principle of working of fluorescence microscope? | CO1 |
| E. Propose the role of thymine dimer in microbial death. | CO2 |
| F. Outline the functions of different macro and micronutrients in microbial growth. | CO1 |
| G. Evaluate various factors involved in sampling for sterility testing. | CO3 |
| H. Which is the suitable phase of growth of microbes to employ sterilizing agent for its killing? | CO2 |
| I. Define TDP and TDT. | CO2 |
| J. State the principle of citrate utilization test. | CO1 |

PART-II

Short Answers

(Instruction: Answer seven out of nine questions)

(7 x 5 = 35 Marks)

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| Q2. Differentiate between prokaryotic and eukaryotic cells. | CO1 |
| Q3. Compare the compositions of gram positive and gram-negative cell wall. | CO1 |
| Q4. Classify major nutritional types of microorganisms with examples. Indicate their source of energy. | CO1 |
| Q5. Illustrate the growth curve of bacteria. | CO1 |
| Q6. Discuss the factors which influences the growth of microorganisms. | CO1 |
| Q7. Elaborate the limitations and advantages of Phenol Co-efficient Tests. | CO3 |
| Q8. What are the different classes of fungi? Discuss with examples. | CO1 |
| Q9. Summarize methods of sterility testing along with the compositions of media used in it. | CO2 |
| Q10. Describe the different tests used for evaluation of disinfectants | CO2 |

PART-III
Long Answers
(Instruction: Answer two out of three questions)

(2 x 10 = 20 marks)

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| Q11. | Discuss the principles of different Electron Microscopes. | CO1 |
| Q12. | Classify and elaborate the chemical sterilization methods. | CO2 |
| Q13. | How microorganisms are used for evaluation of antibiotics? Detail out the procedure. | CO3 |

:::22/11/2022:::E