Graphic Era
HILL UNIVERSITY
Established by an Act of the State Legislature of Uttarakhand (Adhiniyam Sankhya 12 of 2011)
University under section 2(f) of UGC Act, 1956

Sessional I (Odd) Semester Examination, Sep 2025

Roll no.....

Name of the Course and semester: B. Pharm- III sem
Name of the Paper: Pharmaceutical Microbiology
Paper Code: BP 303T
Time: 1.5-hour Maximum Marks: 30

Note:
(i) This question paper contains three sections.
(ii) All the questions are compulsory.
(iii) Write only options in answer. Any cutting and overwriting will not consider for evaluation. (For MCQs only)

Section-A

Q1. Multiple Choice Questions – Attempt all questions (10 x 1 = 10 Marks)

1. Thermostat in autoclave is made of [CO1]
   a. Tungsten
   b. Nichrome wire
   c. Stainless steel
   d. Copper
2. Which one is not referred to BOD incubator? [CO1]
   a. Biological oxygen demand incubator
   b. Microbiological Incubator
   c. Refrigerated Incubator
   d. Bacteriological incubator
3. *Mycobacterium tuberculosis* was discovered by [CO1]
   a. Joseph Lister
   b. Jonas Salk
   c. Robert Koch
   d. Louie pasture
4. Organisms use Carbon-dioxide as carbon source is [CO1]
   a. Lithotrophs
   b. Organotrophs
   c. Heterotrophs
   d. Autotrophs
5. The temperature range of mesophiles is between [CO1]
   a. 15-45 degree C
   b. 40-75 degree C
   c. 0-20 degree C
   d. 35-55 degree C

6. Find the odd one. [CO2]
   a. Streptococcus pneumoniae
   b. E-coli
   c. Neisseria gonorrhoea
   d. Staphylococcus aureus
7. Which is not characteristic feature of Gram -ve bacteria [CO2]
   a. More complex wall
   b. Retain safranin
   c. Inner lipopolysaccharide layer
   d. Thin peptidoglycan cell wall
8. A coliform bacteria produce gas from lactose within [CO2]
   a. 12 hrs
   b. 24 hours
   c. 30 minutes
   d. 48 hours
9. Which value is used to determine the contact time for any sterilization process. [CO2]
   a. D-value
   b. F value
   c. K value
   d. Z value
10. Incineration kills bacteria by [CO2]
   a. Inhibiting protein synthesis
   b. Oxidation effect
   c. Replication of DNA & RNA
   d. Cell wall destruction

Section B

Q. 2 Short Questions: Attempt any two questions (2x5 = 10 Marks)

a. Give the contribution of following in Microbiology field. [CO1]
   i. Zacharia Zenson
   ii. Joseph Lister
   iii. Edward Jenner
   iv. Robert Koch
   v. Louie Pasture
b. Give any one Reduction potential source, Nitrogen source and Energy source as nutritional requirement for microorganisms. [CO1]
c. What are coliform bacteria? Name any three coliform bacteria. [CO2]

Section C

Q. 3 Long questions: Attempt any one question (1x10 = 10 Marks)

a. Write about common isolation techniques of bacteria. Why to preserve bacteria? [CO1]
b. Write the biochemical test for differentiating*E.coli* and *E.aerogen.* [CO2]