

Seat No. : \_\_\_\_\_

**14F-108**

May-2015

**B.Sc., Sem.-II**

**Core Course-3 : Microbiology Paper-103  
(Basic Bacteriology)**

**Time : 3 Hours]**

**[Max. Marks : 70**

- Instructions :**
- (1) All questions are compulsory.
  - (2) On top of the page write clearly the option of question.
  - (3) Draw necessary diagram wherever necessary.

1. Answer any **two** : **14**
  - (a) Draw and differentiate : flagella and gram negative and gram positive bacteria.
  - (b) Describe general nature and significance of pili, prosthecae and stalks.
  - (c) Describe general nature and significance of bacterial cell membrane.
  - (d) Draw and describe sporulation of bacterial endospore.
  
2. Answer any **two** : **14**
  - (a) Describe nutritional diversities in bacteria based on source of electron and energy.
  - (b) Prepare a brief account on nutritional requirement of bacteria.
  - (c) Explain with examples : Selective and differential media.
  - (d) Write note on colony characteristics of bacteria.
  
3. Answer any **two** : **14**
  - (a) Explain : Killing, inhibition and removal of microbes as means of microbial control.
  - (b) Explain use of filtration for microbial control.
  - (c) Enlist characteristics of an ideal antimicrobial agent.
  - (d) Describe halogens and alcohols as antimicrobial chemical agents.
  
4. Answer any **two** : **14**
  - (a) Describe principles of binomial system of nomenclature.
  - (b) Describe Whittaker's system of classification.
  - (c) Describe Carl Woese system of classification.
  - (d) Enlist salient features of Bergey's manual of systematic bacteriology.

5. Answer the followings :

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- (1) Give one example of pleomorphic bacteria.
  - (2) State the role of bacterial mesosome.
  - (3) Name the bacterium whose capsule is composed of polypeptide.
  - (4) Give one difference between autotrophs and phototrophs.
  - (5) Name the carbon source present in N-agar.
  - (6) What do you mean of pellicle growth of bacteria ?
  - (7) How moist heat kills the microbes ?
  - (8) Give one examples of ionizing radiation.
  - (9) Define Sterilization.
  - (10) What is Surfactant ?
  - (11) What is the difference between taxonomy and classification ?
  - (12) What are protists ?
  - (13) What is 16S rRNA ?
  - (14) Give one example of archaebacteria.
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