

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

# AB-116

April-2019

B.Sc., Sem.-II

## CC-103 : Microbiology (Basic Bacteriology)

Time : 2:30 Hours]

[Max. Marks : 70

- Instructions :** (1) All questions are compulsory.  
(2) As given in manuscript.  
(3) Draw labelled diagram as per question needed.

1. (A) Describe in brief different classification schemes of bacteria. **14**

**OR**

- (i) Discuss Whittaker's five kingdom system. **7**  
(ii) Explain Sporulation in details. **7**

(B) Answer any **four** out of **six** : **4**

- (1) Define : Nomenclature.  
(2) Give contribution of Carolus Linnaeus  
(3) Define : Species  
(4) Give full form of SSU rRNAs.  
(5) Define Binomial system.  
(6) Which type of relationship is the base of phylogenetic classification ?

2. (A) Discuss Gram positive and Gram negative bacterial Cell Wall. **14**

**OR**

- (i) List bacterial locomotory organs and describe Flagella in details. **7**  
(ii) Draw and describe : ultra-structure of bacterial cell-membrane. **7**

(B) Answer any **four** out of **six** : **4**

- (1) Write down the full form of NAG.  
(2) What is Phototaxis ?  
(3) Give one function of carboxysome.  
(4) Give an example of capsulated bacteria.  
(5) Write composition of Metachromatic granule.  
(6) Give an example of cell wall-less bacteria.

3. (A) Describe nutritional diversities of bacteria based on carbon and energy source. **14**
- OR**
- (i) Enlist and explain growth characteristics on solid and liquid media. **7**
- (ii) Write note on types of culture media. **7**
- (B) Answer any **three** out of **five** : **3**
- (1) Give the full form of ATP.
- (2) Define psychrophiles.
- (3) Give an example of selective medium.
- (4) Give an example of micronutrient in media.
- (5) What are Halophiles ?
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4. (A) Justify the heat as an agent of Microbial control. **14**
- OR**
- (i) Discuss characteristics of ideal microbial agents. **7**
- (ii) Explain Phenols and Heavy metals as antimicrobial agents. **7**
- (B) Answer any **three** out of **five** : **3**
- (1) Give full form of HEPA.
- (2) Define term Bacteriostatic.
- (3) Give an example of gaseous sterilizing agent.
- (4) Define term Tyndallization.
- (5) What is oligodynamic action ?
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