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 ?

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 ?
