

19/589**M.Sc. First Semester Examination, 2019****BOTANY****First Paper****(Microbiology, Plant Virology and
Bacteriology)****Time : Three Hours****Maximum Marks : 100**

Note : Answer **five** questions in **all**. Short answer type **Question No.1** carrying **40** marks is **compulsory**. Answer **one** question carrying **15** marks from each unit. The answers to short questions should not exceed 200 words and the answers to long questions should not exceed 500 words.

P.T.O.**19/589**1. Give a brief account of the following: $4 \times 10 = 40$

- (i) Koch's Postulates
- (ii) Bacterial endospore
- (iii) Flagellation in Bacteria
- (iv) Biological status of virus
- (v) Plaques
- (vi) Systemic infection
- (vii) Botulism
- (viii) Biochemical oxygen demand (BOD)
- (ix) High-frequency recombination (Hfr)
- (x) Necrosis

Unit - I

2. Describe the method of purification of plant viruses. 15

OR

Describe the external symptoms of virus infected plants.

Unit - II

3. What is the chemical composition of milk?
Discuss the role of microbes in obtaining a
variety of products from milk. 15

OR

What is rhizosphere? Discuss the role of microorganisms in decomposition of organic matter present in the soil.

Unit - III

4. Describe the ultrastructure of a typical bacterial cell and function of cell components. 15

OR

Discuss the replication of prokaryotic genome.

Unit - IV

5. Define bacteriophage. Discuss the life cycle of a virulent bacteriophage. 15

OR

Describe the structure and replication of viroids.