

Roll No. : .....

Total No. of Questions : 11 ]

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# **BPP-1102**

**M.Sc. (Previous) Examination, 2022**

**BIOTECHNOLOGY**

Paper - III

**(Concept of Microbiology and Immunology)**

*Time : 3 Hours ]*

*[ Maximum Marks : 75*

**Section-A**

**(Marks : 2 × 10 = 20)**

*Note :-* Answer all *ten* questions (Answer limit **50** words). Each question carries **2** marks.

**Section-B**

**(Marks : 5 × 5 = 25)**

*Note :-* Answer all *five* questions. Each question has internal choice (Answer limit **200** words). Each question carries **5** marks.

**Section-C**

**(Marks : 10 × 3 = 30)**

*Note :-* Answer any *three* questions out of five (Answer limit **500** words). Each question carries **10** marks.

**Section-A**

2 each

1. (i) Write contribution of Louis Pasteur in Microbiology.
- (ii) Write *two* uses of bacteria in agriculture.
- (iii) What is Mesosome ?

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- (iv) What do you mean by Chemolithotrophs ?
- (v) What is Botulism ?
- (vi) Write about *two* air borne disease.
- (vii) Write symptoms of TMV disease.
- (viii) What do you mean by Plaque assay ?
- (ix) What is Cell Mediated Immunity ?
- (x) What is Immunological Tolerance ?

### **Section-B**

2. Differentiate between TEM and SEM.

*Or*

Discuss distinctive characters of Fungi.

3. Differentiate between Gram positive and Gram negative bacterial cell wall.

*Or*

Discuss differential and selective culture medium with examples.

4. Discuss the role of impingers in air sampling.

*Or*

Explain various food preservation methods used in food industry.

5. Write short note on Pebrine disease.

*Or*

Discuss about Tikka disease of groundnut.

6. Write short note on Natural Killer and Killer Cells.

*Or*

Write principle and uses of RIA.

### **Section-C**

7. Describe principle and applications of Fluorescence microscopy. Write difference between fluorescence and bright field microscopy.

8. Describe various physical methods of sterilization.
9. Describe methods of waste water treatment.
10. Describe viral replication.
11. Describe various antigen antibody reactions.