

1195

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- (ii) Bacterial Growth curve
- (iii) Disease cycle of citrus canker
- (iv) Formation of root nodule
4. Write short notes on the following (**any three**) :  
(3×5=15)
- (i) Baltimore's Classification
- (ii) Wall-less forms of bacteria
- (iii) Griffith's Experiment
- (iv) Role of *Rhizobium* in soil
5. Answer any **two** of the following :  
(2×7.5=15)
- (i) Briefly describe the symptoms, casual organism and control measures of any viral plant disease.
- (ii) Bacteria are an integral part of our daily life. Prove this statement with suitable examples from agriculture, fermentation processes, and medicine.
- (iii) How do Mycorrhiza colonize the host? Describe various benefits of Mycorrhiza.

(1000)

Lib 26/7/23 (m) Room 11

[This question paper contains 4 printed pages.]

26 JUL 2023

Your Roll No. ....

Sr. No. of Question Paper : 1195

Unique Paper Code : 2162011201

Name of the Paper : Microbiology and Plant -  
Microbe Interactions

Name of the Course : B.Sc. (Hons.) Botany - DSC

Semester : II

Duration : 2 Hours

Maximum Marks : 60

**Instructions for Candidates**

- Write your Roll No. on the top immediately on receipt of this question paper.
- Attempt any **four** questions in all.
- Question No. 1 is compulsory.
- Attempt **all** parts of a question together.

1. (a) Fill in the blanks (**any five**) : (5×1=5)

(i) Outside a living cell, virus particle is known as a \_\_\_\_\_

(ii) \_\_\_\_\_ was the first scientist to crystallize a virus.

P.T.O.



(iii) \_\_\_\_\_ and \_\_\_\_\_ discovered process of conjugation.

(iv) Bacterial cell wall is made up of \_\_\_\_\_

(v) *Azolla* and \_\_\_\_\_ constitute an example of symbiotic association

(vi) \_\_\_\_\_ is known as father of microbiology

(b) Select the True/False statement (**any five**) :  
(5×1=5)

(i) SARS-CoV-2 is a novel, positive-sense, single-stranded RNA virus

(ii) Cell lysis occur during the lysogenic cycle

(iii) Cell to cell contact is required in bacterial transduction

(iv) Binary fission is the common mode of reproduction in bacteria

(v) Heterocysts are biological fertilizers

(vi) Mycorrhiza promotes bacterial activity

(c) Expand the following (**any five**) : (5×1=5)

(i) HIV

(ii) ICTV

(iii) NAG

(iv) PPLO

(v) PGPR

(vi) IARI

2. Differentiate between the following (**any five**) :  
(5×3=15)

(i) Lytic cycle and lysogenic cycle

(ii) Viroids and Prions

(iii) Archaeobacteria and Eubacteria

(iv) Gram positive bacteria and Gram negative bacteria

(v) Ectomycorrhiza and Endomycorrhiza

(vi) Synthetic media and Differential media

(vii) Photolithoautotrophs and Chemolithoautotrophs

3. Draw a well labelled diagram (**any Three**) :  
(3×5=15)

(i) Bacteriophage