

2021

Microbiology

[HONOURS]

(CBCS)

(B.Sc. Third Semester End Examinations-2021)

PAPER-SEC1T

Full Marks: 40

Time: 02 Hrs

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

Group-A

- 1. Answer any five from the following: 5x2= 10**
- 1) What is carrier material? Give example? 1+1
 - 2) What is leg haemoglobin? State its function in N₂ fixation. 1+1
 - 3) What types of nutrient are supplied to plant by VAM? 2
 - 4) What are PSMs? Give examples. 1+1
 - 5) Write two advantages of biofertilizer. 2
 - 6) Give examples of each of one ectomycorrhiza and one endomycorrhiza. 1+1
 - 7) Write four character of bio insecticides. 2
 - 8) Give example of one fungal bio pesticide and one viral bio pesticide. 1+1

(2)

Group-B

2. Answer any four from the following: **4x5 = 20**
- 1) a) Write down the advantages of biofertilizer over chemical fertilizer.
b) What is green manuring? 3+2
 - 2) a) Write down the mechanism of phosphate solubilisation by bacteria. 5
 - 3) Write down the characteristics and mass production procedure for Azotobacter bio fertilizer. 2+3
 - 4) Write down the steps of mass inoculums preparation of VAM. What is the difference between bio insecticide and synthetic pesticide 3+2
 - 5) a) Who and how first discovered non-symbiotic N₂ fixers?
b) What do you mean by siderophore? 3+2
 - 6) Write down the mass production procedure of biofertilizer using cyanobacteria sp. 5

Group -C

3. Answer any one of the following : **10x1 = 10**
- 1) a) What are the relation between Rice growth and Cyanobacteria.
b) Write the composition / components of the nitrogenase enzyme complex. 5+5

(3)

- 2) a) Write the differences in the field application of Ectomycorrhizae and VAM.
b) Write the production procedure for the Rhizobeiembiofertilizer and mention its field application.
c) Write the principle of CRYEMA test. 3+(4+2)+1
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