

(i) Printed Pages : 3 Roll No.

(ii) Questions : 9 Sub. Code :

1	0	5	5	3
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Exam. Code :

5	0	0	2
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NEP U.G. Common-Skill Enhancement Course 2nd Sem.

(2056)

BOTANY

Paper : Biofertilizers

Time Allowed : 3 Hours]

[Maximum Marks : 45

Note :— Attempt five questions in all, including Question No. 1 which is compulsory and selecting **one** question from each unit. Draw well-labelled diagrams wherever necessary.

1. (A) Multiple choice questions :

(i) Which among the following is associated with actiniorrhizae ?

(a) Frankia

(b) Funaria

(c) Rhizopus

(d) None of these

(ii) Medium used for culturing of PSB is :

(a) Oken's medium

(b) Jensen's Medium

(c) Pikovskaya's Agar

(d) Astib'y medium

- (iii) Hartig's Net is found in which part of ectomycorrhizal root?
- (a) Mantle (b) Cortex
(c) Epidermis (d) Pith
- (iv) Ectomycorrhiza occur mainly in :
- (a) Forest ecosystems (b) Oceans
(c) Lakes (d) All of the above
- (v) Foreign substances in our ecosystems having toxic effect are :
- (a) Sludge
(b) Recalcitrants
(c) Xenobiotic compounds
(d) None of the above 5×1=5

(B) Fill in the blanks :

- (i) _____ is produced by the activity of saprophytic bacteria on dung, farm refuse and organic waste.
- (ii) *Chroococcum* is a _____ nitrogen fixing bacteria.
- (iii) VAM influences nodulation by increasing the _____ content of the host plant.
- (iv) *Azolla* is commonly known as _____. 4×1=4

UNIT—I

2. Discuss in detail the isolation, identification and mass multiplication of *Rhizobium*. 9

3. Write notes on :
- (a) Mass multiplication of *Azotobacter*.
 - (b) Crop response to *Azotobacter* inoculum 4.5×2

UNIT—II

4. Define biofertilizers. Give a general account of the microbes used as biofertilizers. 9
5. Write notes on :
- (a) Cyanobacteria
 - (b) Nitrogen fixation. 4.5×2

UNIT—III

6. Give an account of mycorrhizal fungi. 9
7. Discuss the isolation of VAM and its influence on growth and yield of crops. 9

UNIT—IV

8. Elucidate on organic farming. 9
9. Elaborate on Vermicomposting. 9