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- (b) Discuss the role of mycorrhiza in plant nutrition. (5)
4. (a) Explain the method of isolation and mass multiplication of *Rhizobium*. (8)
- (b) Write an explanatory note on Azolla-Anabaena association with suitable diagrams. (7)
5. Explain the significance of compost as a biofertilizer. How is biocomposting different from vermicomposting? (15)
6. Give a comparative account of chemical fertilizers and biofertilizers. Explain the scope of biofertilizers in India. (15)

(1000)

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 3504

I

Unique Paper Code : 2164001002

Name of the Paper : Generic Elective (GE) : Botany

Name of the Course : **Biofertilizers**

Semester : I

Duration : 2 Hours

Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt any **four** questions.
3. Question No. 1 is compulsory.
4. **All** parts of the questions should be answered together.
5. Illustrate your answers with suitable diagrams wherever necessary.

P.T.O.

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1. (a) Match the following: (5×1=5)

- | | |
|---|-----------------------|
| (i) Pelotons | (a) Peat |
| (ii) Hyphal mantle | (b) Orchid mycorrhiza |
| (iii) Associative symbiotic
nitrogen fixer | (c) Sugarcane |
| (iv) Acetobacter
diazotrophicus | (d) Azospirillum |
| (v) Carrier material | (e) Ectomycorrhiza |

(b) Define the following (any five): (5×1=5)

- (i) Certified organics
- (ii) Broth culture
- (iii) Nitrogen fixation
- (iv) Biocontrol
- (v) Biofertilizers
- (vi) Mutualism

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

- (i) IARI
- (ii) BGA
- (iii) FYM
- (iv) VAM
- (v) PGPR
- (vi) NPOF

2. Write short notes on the following (any three):
(5×3=15)

- (i) Mass multiplication of biofertilizers
- (ii) Organic fertilizers
- (iii) Carrier based inoculants
- (iv) Actinorrhizal symbiosis
- (v) ISI standard specification for biofertilizers

3. (a) Explain the different methods of isolation and
identification of mycorrhizal fungi. (10)

P.T.O.