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- (b) Discuss the significance of VAM as a Biofertilizer. (5)
5. (a) Describe the *Azolla-Anabaena* symbiotic association with diagrams. What is its significance in rice cultivation. (10)
- (b) In what other ways can Azolla be useful to a farmer? (5)

(1000)

[This question paper contains 4 printed pages.]

21.12.2023 (M) A

Sr. No. of Question Paper : 2369

G

Unique Paper Code : 2164001002

Name of the Paper : Biofertilizer

Name of the Course : **Common Prog. Group**  
**Generic Elective – Botany**

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 **four** questions in all.
3. Question No **1** is compulsory.
4. **All** questions carry equal marks.
5. All parts of a question must be answered together.

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1. (a) Fill in the blanks : (1×5=5)

- (i) \_\_\_\_\_ nutrient is generally higher in vermicompost as compared to the leaf compost.
- (ii) AMF can be isolated from soil with \_\_\_\_\_ technique.
- (iii) \_\_\_\_\_ is an example of a free-living nitrogen fixer.
- (iv) An example of non-symbiotic nitrogen fixing Cyanobacteria is \_\_\_\_\_.
- (v) Indeterminate root nodules has a \_\_\_\_\_ shape generally.

(b) Match the following : (1×5=5)

(a) Heterocyst	(i) <i>Rhizobium</i>
(b) Vesicle	(ii) <i>Eisenia fetida</i>
(c) Root nodule	(iii) <i>Sesbania</i>
(d) Worm-casts	(iv) <i>Anabaena</i>
(e) Green manure	(v) <i>Glomus</i>

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(c) Define (any five) : (1×5=5)

- (i) Arbuscles
- (ii) bio-compost
- (iii) leaf manure
- (iv) growth medium
- (v) broth culture
- (vi) Inoculum

2. (a) Describe root nodule formation in legumes with well labelled diagrams. (10)

(b) How is this beneficial to plants and soil? (5)

3. (a) Write short note on packaging, quality check and ISI standard specification for Biofertilizers. (10)

(b) What is the scope of Biofertilizers in India? (5)

4. (a) Explain any three types of endomycorrhizae with well labelled diagrams. (10)

P.T.O.