

# C.U.SHAH UNIVERSITY

## Winter Examination-2018

**Subject Name: Biofertilizers and Biopesticides**

**Subject Code: 4SC03BAB1**

**Branch: B.Sc. (Microbiology)**

**Semester: 3**

**Date: 04/12/2018**

**Time: 02:30 To 04:00**

**Marks: 35**

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
  - (2) Instructions written on main answer book are strictly to be obeyed.
  - (3) Draw neat diagrams and figures (if necessary) at right places.
  - (4) Assume suitable data if needed.
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**Q-1 Attempt the following questions: (7)**

- a) Rhizobia are the group of soil bacteria that infect the roots of legumes to form root nodules. True/False
- b) Rhizobia are nitrogen-fixing bacteria. True/False
- c) A mycorrhiza is a..... association between a fungus and the roots of a vascular host plant. (symbiotic/non-symbiotic/free living)
- d) Canola oil is considered as .....(biopesticides/biofertilizer)
- e) An ectomycorrhiza is a form of symbiotic relationship between fungus and roots of various plant species. True/False
- f) Azotobacter is from the family of Rhodospirillaceae. True/False
- g) What is PSB?

**Attempt any two questions from Q-2 to Q-5**

**Q-2 Attempt all questions (7)**

- a) What are Frankia? Explain how they are helpful to the plants. (7)
- b) Write advantages of bio-fertilizers over chemical fertilizers. (7)

**Q-3 Attempt all questions (7)**

- a) What are bio insecticides? Explain their applications. (7)
- b) What do you mean by Phosphate solubilizing bacteria? Explain its role in plant growth. (7)

**Q-4 Write short notes on- ((7)**

- a) Mycorrhiza (7)
- b) Bacillus thuringiensis. (7)

**Q-5 Attempt all questions (7)**

- a) What do you mean by VAM? Explain its role in plant growth. (7)
- b) Draw labeled diagram and explain the steps of nitrogen cycle. (7)

