

C.U.SHAH UNIVERSITY

Winter Examination-2018

Subject Name: Agricultural Microbiology

Subject Code: 4SC06AGM1

Branch: B.Sc. (Microbiology)

Semester: 6

Date : 30/10/2018

Time : 02:30 To 05:30

Marks : 70

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.

Q-1

Attempt the following questions:

(1x14=14)

- a) Azospirillum is a nitrogen-fixing bacterial genus. True/False
- b) Define: IPM
- c) animal is known as farmer's friend. (earthworm/cockroach/fruit fly)
- d) What is green house gas?
- e) Bio-composting is good for soil health. True/False
- f) *Rhizobium leguminosarum* is a bacterium which lives in a mutualistic symbiotic relationship with legumes. True/False
- g)is a symbiotic association between a fungus and the roots of a vascular host plant. (Mycorrhiza/ Phycorrhiza/ Trycorrhiza)
- h) Canker is a plant disease. True/False
- i)are substances that are meant to control pests. (Pesticides/Herbicides/Fungicides)
- j) NO (gas) is toxic to the environment. True/False
- k) Powdery mildew is a..... disease that affects a wide range of plants. (fungal/bacterial/viral)
- l) What do you mean by methanogenesis in rice fields?
- m) What is the time required for High temperature short time Pasteurization (HTST).
- n) Integrated pest management is also known as integrated pest control. True/False

Attempt any four questions from Q-2 to Q-8:

Q-2

Attempt all questions

- a) What do you mean by green manure? Explain its advantages over chemical fertilizers. **7**
- b) What is integrated pest management? Explain it with suitable examples. **7**



- Q-3** **Write short notes on-**
- a. Biological control of plant disease **7**
 - b. Composition of milk **7**
- Q-4** **Attempt all questions**
- a. What do you mean by vermicompost? How is it helpful for sustainable development? **7**
 - b. What is nitrogen fixation? Explain the role of microbes in nitrogen fixation. **7**
- Q-5** **Attempt all questions**
- a. What is BGA? Explain its importance in agricultural microbiology. **7**
 - b. Briefly explain the chemical methods of plant disease control. **7**
- Q-6** **Write short notes on-**
- a. C:N:P ratio **7**
 - b. Phosphate solubilizing bacteria **7**
- Q-7** **Attempt all questions**
- a. What is pasteurization? Explain the types of pasteurization. **7**
 - b. Briefly explain the biodegradation of cellulose. **7**
- Q-8** What is biofertilizer? Explain the production and applications of biofertilizers with suitable examples. **(4+10)**

