

Roll No.

Total No. of Questions : 11] [Total No. of Printed Pages : 7

**M.Sc. 3rd Semester Special (ATKT)
Examination July, 2017**

SP-187

**MICROBIOLOGY
(Agriculture Microbiology)
Paper : III**

Time : 3 Hours] [Maximum Marks : 85

Note :- All questions are compulsory.

Section-A

(Objective Type Questions)

1. Choose the correct answer.

- (i) The nonsymbiotic bacteria which fix nitrogen live in the soil independently are :
 - (a) Azotobacter
 - (b) Clostridium
 - (c) Nitrobacter
 - (d) All of the above

- (ii) Which of the following is capable of oxidizing sulfur to sulfates ?
 - (a) Thiobacillus thiooxidans
 - (b) Desulfotomaculum
 - (c) Rhodospirillum
 - (d) Rhodomicrobium
- (iii) The phenomenon of commensalism refers to a relationship between organisms in which :
 - (a) one species of a pair benefits
 - (b) both the species of a pair benefit
 - (c) one species of a pair is more benefitted
 - (d) none of the above
- (iv) Fungi, which can grow on living host plant, are called :
 - (a) Obligate saprophyte
 - (b) Obligate parasite
 - (c) Facultative parasite
 - (d) Saprophytes
- (v) Flag smut of wheat is caused by :
 - (a) Ustilago tritici
 - (b) Urceyctis tritici
 - (c) Ustilago hordet
 - (d) Taphrina deformans

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- (vi) Leaf Blight in Rice is caused by :
 - (a) Virus
 - (b) Bacteria
 - (c) Fungus
 - (d) Protozoa
- (vii) Exclusion of plant disease by legislation is known as :
 - (a) Disease resistance
 - (b) Plant quarantine
 - (c) Biological control of plant
 - (d) Cultural control
- (viii) Botulism is caused by species of :
 - (a) Bacillus <http://www.onlinebu.com>
 - (b) Pseudomonas
 - (c) Agrobacterium
 - (d) Clostridium
- (ix) Mycotoxins are poisonous chemicals Produced by :
 - (a) Bacteria
 - (b) Virus
 - (c) Molds
 - (d) Algae

- (x) Foot rot of papaya is caused by :
 - (a) *Phytophthora palmivora*
 - (b) *Pythium aphanidermatum*
 - (c) *Peronospora parasitica*
 - (d) *Albugo Candida*
- (xi) Yellow ear rot of wheat is caused by :
 - (a) Anguina
 - (b) Corynebacterium
 - (c) Both (a) and (b)
 - (d) Heterodera
- (xii) Viruses are most frequently used to control insect :
 - (a) NPV
 - (b) CPV
 - (c) EPN
 - (d) All of the above
- (xiii) Most spoilage bacteria grow at :
 - (a) acidic pH
 - (b) alkaline pH
 - (c) neutral pH
 - (d) any of the pH

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(xiv) Which are the main source of biofertilizers ?

- (a) Cyanobacteria
- (b) Bacillus
- (c) Streptococcus
- (d) None of these

(xv) Vermicompost is manufacture by :

- (a) Bacteria
- (b) Fungi
- (c) Earthworm
- (d) Virus

Section-B

(Short Answer Type Questions)

2. Explain the Role of Rhizospheric microflora.

Or

Briefly explain Sulphur Cycle.

3. Give a brief account of Green ear disease of Bajra.

Or

What is Alternative Host ?

4. Write short note on any *one* of the following :

- (a) *Beauveria bassiana*
- (b) NPV

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5. Write short note on any *one* of the following :

- (a) Mycotoxins
- (b) Candidiasis

6. Give a brief account of production of biofertilizers.

Or

Write a short note on Vermicomposting.

Section-C

(Long Answer Type Questions)

7. Diagrammatically explain the Carbon Cycle.

Or

Explain in detail the various types of microbial interactions with suitable example.

8. Explain the Bacterial diseases of Plants.

Or

Describe the role of enzymes in Pathogenesis.

9. Discuss about the physical and chemical control of plant diseases.

Or

Explain the role of *Bacillus thuringiensis* in biotechnology.

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10. What is Food Deterioration ? How to control ?

Or

Explain the seed storage methods in detail.

11. Describe the various types of Mycorrhizae and their application.

Or

Discuss about the production of edible mushrooms.

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