

2016

BOTANY

BOT 403

MICROBIOLOGY-III

Full Marks : 80

Time : 3 Hrs

Figures in the right hand margin indicate full marks for the question

1. Answer the following very short questions:

(All questions are compulsory)

2x6=12

- a. Enlist some uses and sources of SCP?
- b. What do you understand by Secondary metabolite?
- c. What is Botulism and its causes?
- d. What is Actinorhiza?
- e. Write some examples and function of Phosphate solubilizing micro-organisms.
- f. What is biotransformation? Give example.

2. Answer to the following short question : (Any three)

3x3=9

- a. Uses of organic solvents
- b. MoER
- c. Food borne diseases
- d. Industrial uses of enzymes

3. Answer the following: (Any four)

5x4=20

- a. PGPR
- b. Use of *Trichoderma viridae* in bio control method

- c. Metagenomic environmental libraries.
- d. Explain bioremediation with suitable examples.
- e. Illustrate the different benevolent interactions within microbial communities of rhizosphere.

4. Answer the following: (Any three)

3x9=27

- a. What are bacteroids? What is NOD factor? Discuss the root nodule formation in Rhizobium legume association.

2+2+5=9

- b. What are the constituent of organic matter? Discuss the various processes involved in organic matter decomposition.

3+6=9

- c. What are the various causes of food spoilage? Describe the microbial spoilage of vegetable, fruits, cereal, grains and meat.

4+5=9

- d. What are bioreactors? Write a note on different types of bioreactors and their uses.

1+8=9

5. Answer the following: (Any one)

- a. What is downstream processing? Describe the range of fermentation process.

4+8=12

- b. What is the mode of action of antibiotics? Describe the industrial production of Antibiotics (Penicillin).

3+9=12
