

SSR DEGREE AND PG COLLEGE (AUTONOMOUS)

DEPARTMENT OF MICROBIOLOGY

SEMESTER – III, IMPORTANT QUESTIONS

UNIT – I: Food Microbiology

Short Questions (4 Marks)

1. Probiotics.
2. Mushroom cultivation.
3. Fermented foods of India.
4. Food spoilage microorganisms.
5. Food-borne hazards.

Essay Questions (10 Marks)

1. Explain the microorganisms used in food fermentation and their significance.
2. Describe the fermentation of Sauerkraut, Pickles and Idly.
3. Explain the production of fermented dairy products (Cheese, Yoghurt, Kefir and Bulgarian milk).
4. Discuss microbial spoilage of foods and food poisoning.

UNIT – II: Air, Water and Soil Microbiology

Short Questions (4 Marks)

1. Microorganisms in air.
2. Biological properties of soil.
3. Water pollution.
4. Carbon cycle.
5. Nitrogen cycle.

Essay Questions (10 Marks)

1. Explain the microbiology of water and sanitary quality of water.
2. Describe aerobic and anaerobic sewage treatment.
3. Explain the Carbon and Nitrogen cycles with the role of microorganisms.
4. Discuss microbial bioremediation and degradation of pollutants.

UNIT – III: Microbes in Agriculture

Short Questions (4 Marks)

1. Rhizosphere.
2. Phyllosphere.
3. Mycorrhiza.
4. Azolla.
5. Nano-biofertilizers.

Essay Questions (10 Marks)

1. Explain plant–microbe interactions with reference to Rhizosphere, Phyllosphere and Mycorrhizae.
2. Discuss biofertilizers and their agricultural importance.
3. Explain biopesticides and the production of Trichoderma and Pseudomonas.
4. Discuss the role of microorganisms in sustainable agriculture.

UNIT – IV: Microbial Biotechnology for industrial products

Short Questions (4 Marks)

1. Plasmids.
2. Cloning vectors.
3. Recombinant DNA technology.
4. Gene cloning.
5. Industrial products of microorganisms.

Essay Questions (10 Marks)

1. Explain plasmids and cloning vectors used in genetic engineering.
2. Describe gene cloning and its applications.
3. Explain the production of human insulin using recombinant DNA technology.
4. Discuss the industrial applications of microorganisms in biotechnology.