

**Diploma in Microbial Analysis and Food Safety**  
**First Semester**  
**Principles of food safety and sanitation: MFS-105**

**Max. Marks: 40**

**Time allowed: 3 hrs.**

*Note: Attempt five questions in all, including Question no. 1 which is compulsory and selecting one question from each Unit.*

**Q1. Each question carry equal marks (1)**

- a) Give one example of Non-degradable & biodegradable wastes from food industries?
- b) Define Composting?
- c) Define Disinfection and give its examples?
- d) Name the regulatory agencies which control food quality?
- e) Name any two Biofilm producing microorganisms?
- f) Enlist 3 pest control measures used in grain storage warehouses?
- g) Differentiate between Cleaning agents and Sanitizers.
- h) What are the methods of disposal of solid wastes?

**UNIT-1**

**Q2. I)** Define Sanitation and its importance. Explain in steps of Control measures for ensuring food safety in any food establishments? (8)

**II)** What are the steps of Biofilm formation in food processing industry and Give few preventive steps? (8)

**UNIT-II**

**Q3. I)** Explain the Various types of cleaning mechanisms of cleaning agents? (8)

**II)** Explain the mechanism of action of the Sanitizers? (8)

**UNIT-III**

**Q4. I)** What are the various types of waste produced by food industry and what are the various end products which can be prepared from wastes? (8)

**II)** Explain various steps required for waste water treatment in food plants? (8)

#### **UNIT-IV**

**Q5. I)** What are the Key Elements of ISO 14001? (8)

**II)** What are the various Standards for emission of environmental pollutants from food processing industries? (8)