

FACULTY OF DAIRY SCIENCE  
ANAND AGRICULTURAL UNIVERSITY  
ANAND

Sixth Semester B.Tech (DT) Semester End Examination  
DM-3207: Food and Industrial Microbiology

Date: 04/10/2019

Time: 09:00-11.30 Hrs.

Day: Friday

Max Marks: 80

Note: a) Attempt all the questions (Any eight)

b) Answer the following questions with appropriate answers

1. Differentiate primary and secondary metabolites. Differentiate Solid state (1+2+7) and submerged Fermentation process. Explain the different parts of the fermentor and their specific functions with suitable diagram.
2. Explain the internal and external factors responsible for the growth of (5+5) organisms in food matrix.
3. Write short notes (Attempt any four) (4X2.5=10)
  - i. SCP
  - ii. Antibiotics
  - iii. High Hydrostatic Pressure
  - iv. Mode of action of ultrasounds on bacterial cells
  - v. Irradiation in food preservation
4. Define hurdle technology. Classify the intelligent packaging system. (1+3+6) Explain the applications of intelligent packaging on food products to extend the shelf life.
5. Define intoxication, toxicoinfection and infection. List out the names of (3+3+4) emerging food borne organisms. Explain the major compositional changes takes place during the spoilage of vegetables.
6. Define Bacteriocin. Classify the different types of Bacteriocin. Explain the (2+2+4+2) application of bacteriocins in food biopreservations.
7. Explain the mode of physiological action of organic acids against bacterial (4+6) cells. Describe the biochemical process of citric acid production in a commercial manner.
8. Define food irradiation. Describe the mode of action of irradiation on (1+4+5) microbes in foods. Explain the commercial production of Penicillin through a fermenter study.
9. Define food spoilage. Explain the various types of spoilages of Vegetables (1+4+5) and Fruits mentioning the cause and particular rots.