

B.Tech.
2017
3rd Sem.

B.Tech 2nd year
Semester-III Examination, 2017
Paper Title: Food Microbiology
Paper Code: BFTC-302

Roll no: _____

Time allowed: 3 hr

Max. marks: 70

(Write Roll no. at the top immediately on receipt of question paper) Section A is compulsory, Attempt any four questions from section B.

Section A (5*6=30)

1. What are the intrinsic parameters of food? How those parameters influence the growth of microbes in food?
2. Enlist the energy sources and nutritional compounds required for bacterial growth and classify bacteria based on the requirement of temperature and oxygen for their growth.
3. Write a commonly used method for isolation of pure culture of bacterium.
4. Differentiate between food borne intoxication and food borne infection. Name any four organisms responsible for food poisoning.
5. Fill in the blanks:
 - a) Viruses that infect bacteria are known as _____.
 - b) Group of organisms that can withstand dry conditions for their survival are known as _____.
 - c) Bacterial soft rot is caused by _____.
 - d) Full form of GRAS: _____.
 - e) The underlying principle behind using freeze drying as the method for preservation of microbes is _____.
 - f) _____ is the only permitted additive for the preservation of flesh foods.

Section B (4*10=40)

1. Which species of bacteria produce endospores? Indicate shape and location of endospores in bacterial cell and structural changes in the bacterial cell during sporulation with suitable diagram.
2. Differentiate between prebiotics and probiotics. Explain the health benefits of probiotics in humans.
3. What is curing? Give a flowchart mentioning its various chemical forms under different conditions during meat processing and curing.
4. Describe the method of preparation of two common fermented foods. Fermented food is digestible—explain.
5. List various chemical agents used for controlling growth of microorganisms. Write in details, application of any three chemical agents.
6. Write short notes on (*any two*):
 - a. Fungal spoilage in eggs
 - b. Preservation methods for seafoods
 - c. Hurdle effect