



**KERALA AGRICULTURAL UNIVERSITY**  
**B.Tech.(Food Technology) 2021 Admission**  
**VI Semester Final Examination – June 2024**

Pafe.3235

**Food Quality, Safety Standards and Certification (2+0)**

**Marks: 50**  
**Time: 2 hours**

**I Choose the correct answer**

**(10x1=10)**

1. Which of the following foods commonly suffer from non-enzymatic darkening?
  - (a) Jelly
  - (b) Ice-cream
  - (c) Biscuit
  - (d) Cut fruits
2. Match one of the following ISO standards is a food safety management system (FSMS) tool for implementing HACCP.
  - (a) ISO9000
  - (b) ISO14000
  - (c) ISO22000
  - (d) None of these
3. HACCP was invented by –
  - (a) PepsiCo
  - (b) Dabur
  - (c) Coca Cola
  - (d) Pillsbury
4. Which one of the following is a descriptive sensory analysis of food?
  - (a) Duo-trio
  - (b) Triangle
  - (c) Texture profile
  - (d) None of these
5. Which one of the following is a common physical hazard in cereals?
  - (a) Stone
  - (b) Aflatoxin
  - (c) Broken grains
  - (d) All of these
6. Trained panel is frequently needed in which one of the following sensory analyses?
  - (a) Paired comparison
  - (b) Triangle
  - (c) Duo-trio
  - (d) Hedonic scale
7. Which one of the following is a common biological hazard in cereals?
  - (a) Aflatoxin
  - (b) Shiga toxin
  - (c) Botulinum toxin
  - (d) None of these
8. Which one of the following is a common chemical hazard in milk?
  - (a) Lactose
  - (b) Pesticide residue
  - (c) Colostrum
  - (d) All of these



**Answer the following**

9. Give an example of isolation of defects in a food processing facility by floatation.  
**State True or False**
10. Seafood toxin is a chemical hazard naturally present in many seafoods.

**II Write short notes on ANY FIVE of the following (5x2=10)**

1. Briefly elaborate on the two major differences between discriminative and descriptive sensory analyses.
2. Define "incubation period" of a foodborne illness.
3. What is "MPN" method of enumerating microbial population in a food sample?
4. Define "quality" of a food in terms of consumers' requirements.
5. Explain auditory sensory quality of food using an example.
6. What is a "selective" microbiological culture media?
7. Name a spore-forming and a non-spore-forming pathogen commonly associated with contaminated food.

**III Answer ANY FIVE of the following (5x4=20)**

1. Describe the working principle of Lovibond® tintometer used to measure color of a food sample.
2. Write short-notes on "triangle test" and "hedonic scaling".
3. Briefly elaborate on "Lag" and "Log" phases of microbial growth.
4. Describe water activity of a food, and explain how it affects food quality.
5. What is a "third party audit", and why is it needed by a food industry?
6. According to the GMP, what are the general requirements for food processing equipments?
7. What are the three major activities in "corrective actions" to be taken / planned in a HACCP plan for a food manufacturing line?

**IV Write an essay on ANY ONE of the following (1x10=10)**

1. Give a process flow-diagram of pouch-packed pasteurized milk, and describe the decision tree to determine the processing step "pasteurization" as a critical control point.
2. Elaborate on the requirements of good manufacturing practices for health, clothing and sanitation of workers working in a food manufacturing organization.

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