


Name:			
Enrolment No:			
UPES End Semester (Odd) Examination, December 2024.			
Course: Food Safety and Laws		Semester: III	
Program: B.Sc. Food Nutrition and Dietetics		Duration: 03 Hours	
Course Code: HSFN2001		Max. Marks: 100	
Instructions: Read each question carefully and answer.			
S.No.	SECTION A Short answer questions MCQs/T&F/Fill in the blanks (20Qx1.5M=30 Marks)	Marks	COs
Q 1	Define generation time for microorganisms.	1.5	CO2
Q2	Define food safety.	1.5	CO1
Q3	Toxins released by <i>Bacillus cereus</i> are: a) Enterotoxin and Diarrheal toxin b) Emetic toxin and Diarrheal toxin c) Mycotoxins and Emetic toxin d) Mycotoxins and Diarrheal toxin	1.5	CO2
Q4	What is the full form of HUS that can lead to kidney failure?	1.5	CO2
Q5	Choose the phase where the rate of cell death equals the rate of new cell formation in microbial growth. a) Stationary phase b) Log phase c) Lag phase d) Death phase	1.5	CO2
Q6	HACCP includes a tree to determine critical control points.	1.5	CO3
Q7	The full form of FSMS is: a) Food Safety Management System b) Food Security Management system c) Food Safety Maintaining System d) Food Security Management System	1.5	CO5
Q8	What is GAP?	1.5	CO1
Q9	CODEX was established by a) FAO b) WHO c) Both d) None	1.5	CO5
Q10	Physical contamination can be prevented by: a) Metal detectors and X-rays b) GAP c) Proper labelling d) both (a) and (b)	1.5	CO2
Q11	The Headquarter of ISO is situated in: a) Delhi, India b) Geneva, Switzerland c) New York, USA d) London, UK	1.5	CO3
Q12	What is the full form of ISO?	1.5	CO3
Q13	What are high-risk foods? a) High in contamination b) Have a high tendency to get contamination c) none d) both	1.5	CO1

Q14	The company that 1 st used HACCP to supply food in space is Nestle a) True b) False	1.5	CO5
Q15	Freezing can: a) Reduce the growth of the bacteria b) Kill the bacteria c) Stops the growth of the bacteria d) None	1.5	CO1
Q16	The pH range of the neutrophiles is.....	1.5	CO2
Q17	Write the full form of BRC	1.5	CO3
Q18	Which of the following does not get affected by oxygen? a) Aerotolerant Anaerobes b) Facultative anaerobes c) None d) Both (a) and (b)	1.5	CO2
Q19	Emetic form of <i>Bacillus cereus</i> is heat..... toxin.	1.5	CO2
Q20	Statement: ISO is an international and non-governmental organization. a) True b) False	1.5	CO4
SECTION B (20 Marks) (4Qx5M=20 Marks) Attempt 4 Question out of 5			
Q1	Describe physical contamination in food, their sources, and preventions in detail.	5	CO2
Q2	Write a brief note on “Key Safe Food Storage Practices”.	5	CO1
Q3	Discuss in detail the microbial growth phase.	5	CO2
Q4	Discuss in detail about the structured framework (DMAIC) of the Six Sigma methodology	5	CO5
Q5	What is “Brand reputation through compliance?” Discuss its importance and advantages.	5	CO3
SECTION-C (30 Marks) (2Qx15M=30 Marks) Attempt 2 Question out of 3			
Q 1	a) What is HACCP? Mention its importance. b) What are the principles of HACCP? Describe in detail. c) Write a brief note on “Steps involved in implementing the HACCP plan.”	15 (5+5+5)	CO3
Q2	Case Study Question: Scenario: Sunny Fresh Farms is a company that supplies fresh produce to grocery stores and restaurants across the country. Recently, a batch of its lettuce was found to be contaminated with <i>E. coli</i> bacteria, leading to an outbreak of foodborne illness affecting hundreds of consumers. Symptoms reported by affected individuals included severe stomach cramps, diarrhoea, and dehydration. The investigation traced the contamination back to a water source on the farm that was used for irrigation. This incident prompted Sunny Fresh Farms to recall all lettuce products distributed in the past month, resulting in substantial financial losses, negative media attention, and loss of consumer trust. The incident also highlighted several weaknesses in the company’s food safety protocols, including inadequate testing of water sources, lack of traceability in the supply chain, and insufficient employee training on hygiene practices.	15 (5+5+5)	CO5

	<p>Question: Based on the case study, answer the following questions:</p> <ol style="list-style-type: none"> 1. Identify and explain three critical weaknesses in Sunny Fresh Farms' food safety protocols that may have contributed to the <i>E. coli</i> contamination. 2. Analyze the potential impact of the contamination on the company's financial stability, reputation, and relationships with grocery stores and restaurants. 3. Recommend three strategic actions Sunny Fresh Farms should take to restore consumer trust and improve food safety. Explain how each action would help prevent future contamination incidents. 		
Q3	<p>Describe in detail the following:</p> <ol style="list-style-type: none"> a) Role of Codex Alimentarius in Harmonizing Global Food Safety Requirements. b) Key Components of Codex Alimentarius c) Benefits of Codex Alimentarius Standards 	15 (5+5+5)	CO4
<p>SECTION-D (20 Marks) (2Qx10M=20 Marks) Attempt 2 Question out of 3</p>			
Q1	What is chemical food contamination? Describe in detail any 5 types of chemical food contamination with their examples and risks.	10	CO1
Q2	Describe the types of documents and steps for document control in ISO 22000 in detail.	10	CO3
Q3	What is food intoxication? Write detailed notes on its mechanism and causative agents.	10	CO3