


Name:			
Enrolment No:			
UNIVERSITY OF PETROLEUM AND ENERGY STUDIES End Semester (Odd) Examination, December 2024.			
Course: Food Microbiology		Semester: V	
Program: B.Sc. FND and Int. B.Sc.M.Sc Microbiology		Time : 03 hrs.	
Course Code: HSMB3029		Max. Marks: 100	
Instructions:			
SECTION A (5Qx4M=20Marks)			
S. No.		Marks	CO
	Statement of question		
Q 1	What is the limitation of conventional food preservation process?	4	CO1
Q 2	Explain the impact of endolysin on controlling gram negative bacteria in food.	4	CO4
Q 3	Write four signs of food intoxication.	4	CO3
Q 4	How pH impacted the spoilage of different group of fresh food products?	4	CO1
Q 5	Explain the aerobic spoilage of meat by molds.	4	CO2
SECTION B (4Qx10M= 40 Marks)			
	Statement of question		
Q7	a) Write a short note on the anaerobic spoilage of meat? b) Discuss ways to reduce spoilage in meat products. c) What are the sources of microbes in the meat?	5+3+2=10	CO1
Q 8	a) Define microbial spoilage of food. b) Discuss on the physical and chemical food spoilage. c) Write name of one bacterial and one mold toxin producing microbes.	2+6+2=10	CO2
Q 9	a) How will you evaluate the bacterial spoiling of eggs? b) What is pin-spot modling?	5+5=10	CO2
Q 10	a) Write the name of the microbe that produces salmonellosis. b) What would be the symptoms of salmonellosis? c) Which types of foods are associated with such disease? d) Write names of four selective media used to detect the causative agent of salmonellosis.	2+2+2+4=10	CO1
SECTION-C (2Qx20M=40 Marks)			
	Statement of question		
Q 11	a) Write a short note on emerging food preservation technologies. b) What is bio-preservation? c) Why LAB is considered as one of the best bio-preservatives of food?	5+2+4+6+3=20	CO3

	<ul style="list-style-type: none"> d) Classify bacteriocin with one example. e) Write limitation of endolysin as a food preservatives. 		
Q 12	<ul style="list-style-type: none"> a) What is the HACCP? b) Why is HACCP needed in food processing? c) How many principles are there for HACCP? d) Explain how principle II and III is essential for a good HACCP plan? e) Why auditing and record keeping is essential for an effective HACCP? 	$2+4+4+5+5$ $=20$	