


Name:	
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2022

Course: Food Handling and Packaging Program: B.Sc (Food Nutrition and Dietetics) Course Code: HSFN3005	Semester : 6th Duration: 3 Hours Max. Marks: 100
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Instructions:

S. No.	Section A Short answer questions/ MCQ/T&F (20Qx1.5M= 30 Marks)	Marks	COs
Q 1			
1	What is primary, secondary and tertiary packaging. Give examples.	1.5	CO 1
2	Name the factors that can affect the packaging design. (At least 3)	1.5	CO 1
3	Differentiate between LDPE and HDPE.	1.5	CO 1
4	Thermoplastics are less rigid than thermosetting polymer. (a) True (b) False	1.5	CO 1
5	How PET plastic is formed? Write down its advantages.	1.5	CO 1
6	Removing secondary packaging doesn't affect the product's quality. (a) True (b) False	1.5	CO 1
7	How is the gob formed in glass manufacturing process?	1.5	CO 2
8	Titanium is used in which surface treatment of the glass? (a) Hot end treatment (b) Cold end treatment	1.5	CO 2
9	What is the use of refiner in paper packaging?	1.5	CO 2
10	In pressing method, moisture content is reduced to _____%.	1.5	CO 2
11	What is calendaring?	1.5	CO 2
12	List the equipment (any 3) used in paper board packaging manufacturing process.	1.5	CO 2
13	Name the following abbreviations. (a) SBB (b) WLC (c) PVdC	1.5	CO 2
14	State the composition of dark green type glass.	1.5	CO 3

15	What temperature is maintained in parison mould in glass manufacturing?	1.5	CO 3
16	What is the use of oxygen scavengers in active packaging?	1.5	CO 3
17	Define lacquering.	1.5	CO 3
18	What raw materials are required to design the can making process?	1.5	CO 3
19	Define active packaging.	1.5	CO 3
20	Which plastics can be used in MAP?	1.5	CO 3
Section B (4Qx5M=20 Marks)			
Q 1			
1	Define the following terms with examples. (a) Rigid plastic packaging (2.5 marks) (b) Flexible plastic packaging (2.5 marks)	5	CO 1
2	Differentiate between press and blow process and blow and blow process.	5	CO 2
3	Discuss the type of seal required for the closure of glass containers.	5	CO 3
4	Discuss the direct method and survival method for shelf-life analysis method.	5	CO 3
Section C (2Qx15M=30 Marks)			
Q 1			
1	Briefly discuss each manufacturing process of paper and paper board packaging.	15	CO 4
2	How the food and drinks are processed in metal packages. Discuss all the processes in details.	15	CO 5
Section D (2Qx10M=20 Marks)			
Q 1			
1	Discuss the environmental profile of glass packaging.	10	CO 4
2	Name the five methodologies that are followed to determine foods' shelf life. (5 marks) Discuss any two methodologies in details. (5 marks)	10	CO 5