


Name:			
Enrolment No:			
UNIVERSITY OF PETROLEUM AND ENERGY STUDIES End Semester Examination, May 2022			
Course: Food Handling and Packaging Semester: VI Program: B.Sc. Food, Nutrition and Dietetics Course Code: HSFN30005P		Time : 03 hrs. Max. Marks: 100	
Instructions:			
Q.No	Section A Short answer questions/ MCQ/T&F	(20Q x1.5M= 30 Marks)	COs
Q			CO
1.	Different types of packaging materials are ----- and -----.	1.5	CO1
2.	Different forms of metal containers are ----- and -----.	1.5	CO2
3.	Define role of ideal packaging systems.	1.5	CO2
4.	Define recycling of packaging materials.	1.5	CO3
5.	Packaging is an essential part of processing and preparing foods. a) True b) False	1.5	CO4
6.	Packaging can be a shelf life limiting factor in its own right. a)True b) False	1.5	CO4
7.	Define shelf-life of a product.	1.5	CO4
8.	Define pH or total acidity.	1.5	CO3
9.	Relative humidity is an environmental factor. a) True b) False	1.5	CO4
10.	Temperature is an environmental factor. a) True. b) False.	1.5	CO3

11.	Define enzymic reactions.	1.5	CO2
12.	Non-enzymic browning is a deteriorative chemical reaction. a) True b) False.	1.5	CO5
13.	The four major factors that influence nutrient degradation are: a)Light b) Oxygen Concentration c) Temperature d) All of the above.	1.5	CO4
14.	Chemical reactions are due to oxidation and non-enzymic browning reactions. a) True b) False	1.5	CO5
15.	The most important quality related changes are a) Chemical reactions b) Microbial reactions c) Biochemical Reactions. d) All of the above	1.5	CO2
16.	Define fat oxidation.	1.5	CO5
17.	What do you mean by gelation?	1.5	CO5
18.	What do you mean by packaging?	1.5	CO4
19.	Packaging is an industrial and marketing tool. a) True. b) False	1.5	CO2
20.	Ethylene scavengers involve addition of potassium permanganate. a) True b) False	1.5	CO3
	Section B	(4Qx5M=20 Marks)	CO
Q			
1.	Define Polyethylene Terephthalate.	5	CO1
2.	Describe what you mean by spoilage mechanism during storage.	5	CO3
3.	Define what do you mean by Polystyrene.	5	CO1
4.	What are the factors affecting shelf-life of foods?	5	CO2
	Section C	(2Qx15M=30 Marks)	

Q			CO
1.	Describe the contribution of glass in packaging. Broad external uses on packaging for fast moving consumer products may be summarized as follows: a) technological, b) political/legal, c)socio-cultural, d) demographic, e)ecological, f) demographic, g) raw material availability and h)economic. This is envisioned in developing as well as developed nations around the world. Discuss about this statement.	15	CO3
2.	Discuss the contribution of plastics in packaging. The retailing, food manufacturing and packaging supply industries are continuing to expand their operations internationally. The sourcing of products from around the world is increasingly assisted by a reduction in trade barriers. The effect has been an increase in competition and a downward pressure in prices. Discuss about this issue.	15	CO1
	Section D	(2Qx10M=20 Marks)	
Q			CO
1.	Discuss what do you mean by LDPE and HDPE.	10	CO5
2.	Describe what is the contribution of metals in packaging.	10	CO5