

Name:

Enrolment No:



UPES

End Semester Examination, May 2024

Course: Food Packaging Technology

Program: B. Tech (Food Technology)

Course Code: HSFT3015

Semester : VI

Duration : 3 Hours

Max. Marks: 100

Instructions: Read all the questions carefully and attend.

S. No.	Section A	Marks	COs
	Short answer questions/ MCQ/T&F (20Qx1.5M= 30 Marks)		
Q1	The term “blow molding” is used in the production of (a) Metal can (b) Plastic bottle (c) Plastic laminates (d) All of the above	1.5	CO 1
Q2	A corrugated fibre board carton holding several units of canned fruits is an example of (a) Primary packaging (b) Secondary Packaging (c) Tertiary Packaging (d) Quaternary packaging	1.5	CO 1
Q3	Thermoplastics are less rigid than thermosetting polymer. (a) True (b) False	1.5	CO 1
Q4	Removing secondary packaging doesn't affect the product's quality. (a) True (b) False	1.5	CO 1
Q5	Name the factors that can affect the packaging design. (At least 5)	1.5	CO 1
Q6	What is aseptic packaging? Discuss its advantages.	1.5	CO 1
Q7	How is the gob formed in glass manufacturing process?	1.5	CO 2
Q8	Titanium is used in which surface treatment of the glass? (a) Hot end treatment (b) Cold end treatment	1.5	CO 2

Q9	What is the use of refiner in paper packaging?	1.5	CO 2
Q10	In pressing method, moisture content is reduced to _____%.	1.5	CO 2
Q11	What is calendaring?	1.5	CO 2
Q12	List the equipment (any 3) used in paper board packaging manufacturing process.	1.5	CO 2
Q13	Differentiate between maker's end and canner's end.	1.5	CO 2
Q14	State the composition of dark green type glass.	1.5	CO 3
Q15	What temperature is maintained in parison mould in glass manufacturing?	1.5	CO 3
Q16	What is the use of oxygen scavengers in active packaging?	1.5	CO 3
Q17	Define lacquering.	1.5	CO 3
Q18	In 3-piece welded can, the sheets are dried in heated oven at a temperature of _____ °C.	1.5	CO 3
Q19	The grammages for tissues range from ___ to ___ g/m ² .	1.5	CO 3
Q20	Name the full form of MAP and which plastics can be used in MAP?	1.5	CO 3
Section B (4Qx5M=20 Marks)			
Q1	Define the following packaging with examples. (a) Rigid plastic packaging (2.5 marks) (b) Flexible plastic packaging (2.5 marks)	5	CO 1
Q2	Differentiate between press and blow process and blow and blow process.	5	CO 2
Q3	Discuss the type of seal required for the closure of glass containers.	5	CO 3
Q4	Why are the coating materials required for metal packaging containers?	5	CO 3
Section C (2Qx15M=30 Marks)			
Q1	Mr. Abinash Sah, an aspiring entrepreneur keen on venturing into the metal can packaging industry to produce containers for food and beverage products. As you are aware of the required processing methods for metal packages, explore the comprehensive processing	15	CO 4

	<p>methods crucial for the successful establishment and operation of such a packaging venture.</p> <p>(a) What processing methods should Mr. Abinash Sah consider in initiating his metal can packaging enterprise for food and beverage products? (5 marks)</p> <p>(b) Analyze the pivotal processing methods essential for manufacturing metal cans suitable for food and drink packaging, detailing each step from raw material acquisition to the final product. (5 marks)</p> <p>(c) Assess the sustainability practices and environmental considerations Mr. Abinash Sah should integrate into his metal can packaging manufacturing processes to align with modern consumer preferences and global environmental initiatives. (5 marks)</p>		
Q2	<p>Discuss the preparation method for following paperboard packaging materials with a net diagram.</p> <p>(a) Solid Bleached Board and Solid Unbleached Board (5 marks)</p> <p>(b) Folding Boxboard (5 marks)</p> <p>(c) White lined chipboard (5 marks)</p>	15	CO 5
<p>Section D (2Qx10M=20 Marks)</p>			
Q1	<p>Discuss the following end making processes of metal can packaging materials.</p> <p>(a) Plain end forming process (5 marks)</p> <p>(b) Easy open end forming process (5 marks)</p>	10	CO 4
Q2	<p>(a) Explain the manufacturing of tin and ECCS used in can making process. (5 marks)</p> <p>(b) Discuss the benefits of the various materials utilized in the process of manufacturing cans. (5 marks)</p>	10	CO 5