



Time:3hrs

CO1	Articulate the types of packages and manufacturing processes.
CO2	Comprehend the importance of package design for various applications
CO3	Analyze various test methods for package suitability
CO4	Summarize the concepts of food, Pharma and FMCG packaging
CO5	To create the design of primary, secondary and tertiary packaging

**BL – Bloom's Taxonomy Levels**  
(L1-Remembering, L2-Understanding, L3-Applying, L4-Analysing, L5-Evaluating, L6-Creating)

**PART- A(10x2=20Marks)**  
(Answer all Questions)

Q.No.	Questions	Marks	CO	BL
1	What is packaging?	2	1	1
2	What is shelf life?	2	1	2
3	List some of the vector image formats.	2	2	1
4	What is unit load?	2	2	2
5	What are the types of propellant used in aerosol packaging?	2	5	1
6	How blister packs are formed?	2	5	2
7	Differentiate between the creasing done in machine and cross machine direction.	2	3	4
8	What are the types of packaging pouches? Provide diagrams.	2	3	1
9	What is McKee's formula?	2	4	1
10	What is the use of ring crush test?	2	4	2

**PART- B(5x 13=65Marks)**

Q.No.	Questions	Marks	CO	BL
11 (a)	Explain in detail about the hazards to a package.	13	1	3
	OR			
11 (b)	Explain in detail about the functions of a package.	13	1	3
12 (a)	With neat diagram explain the structure of glass bottles with proper explanation for each design feature.	13	2	3
	OR			
12 (b)	Briefly describe about the process involved in developing graphic design for packages.	13	2	3
13 (a)	What are the types of closures used in packaging and provide the specification for a threaded closure with neat diagram?	13	5	3
	OR			
13 (b)	Explain in detail about the properties of cushions used in packaging.	13	5	3

14 (a)	With neat diagram explain the manufacturing process of corrugated boards.	13	3	
<b>OR</b>				
14 (b)	With neat diagram explain the manufacturing process of collapsible tubes.	13	3	2
<b>OR</b>				
15 (a) i) ii)	Explain about drop testing of packages. Explain about inclined impact test.	8 5	4	3
15 (b)	Explain in detail about distribution testing of bulk packages.	13	4	3

**PART- C(1x 15=15Marks)**

(Q.No.16 is compulsory)

Q.No.	Questions	Marks	CO	BL
16.	Explain how you would design a package for a perfume. Provide justification for the design features.	15	2	6

