

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER-VI (NEW) EXAMINATION – WINTER 2020

Subject Code:2162310

Date:01/02/2021

Subject Name:Plastic Packaging Technology

Time:02:00 PM TO 04:00 PM

Total Marks: 56

Instructions:

1. Attempt any FOUR questions out of EIGHT questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

	MARKS
Q.1 (a) What is Retort Package?	03
(b) Describe the advantages of Metallizing over film.	04
(c) Highlight advantages and limitations of Shrink-wrap, Stretch wrap, Skin Package.	07
Q.2 (a) Give Difference between Primary and Secondary Packaging.	03
(b) Describe the atmospheric factors that may cause the product to deteriorate.	04
(c) Which Plastic materials are preferred for film application? Enlist advantages and limitations of each.	07
Q.3 (a) What is purpose of Labeling?	03
(b) Explain difference between Blister and Skin Packaging.	04
(c) What are the critical factors affecting Wooden Container Design?	07
Q.4 (a) What is the importance of Color in packaging?	03
(b) What effects can vibration have on Carbonated beverage Bottle & portable stereo recorder?	04
(c) Give the properties and applications of LDPE, HDPE and LLDPE used as plastics packaging material	07
Q.5 (a) Explain Mechanical Hazards in Packaging.	03
(b) What is the role of nanotechnology in packaging?	04
(c) Give properties and applications of Polystyrene (PS) and Polyamides (Nylons) used in packaging.	07
Q.6 (a) What are essential requirements of Retail Packaging?	03
(b) Explain briefly about drop test of Plastics Package.	04
(c) Describe Pad printing process with neat diagram and give their applications.	07
Q.7 (a) What are the methods of evaluation of shelf life of food products?	03
(b) State the importance of Barrier properties. Explain the procedure to determine barrier properties in packaging.	04
(c) Define Surface treatment. Why polyolefins are irrespective with ink? List the Surface treatment process carried out on plastic packaging materials.	07
Q.8 (a) Enumerate the principles of Packaging.	03
(b) Under what circumstances would you select MAP and CAP packaging.	04
(c) Explain the Hot Stamping process used in decorating plastic packaging.	07
