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GIET UNIVERSITY, GUNUPUR – 765022

B. Tech (Seventh Semester – Regular) Examinations, November – 2022

BPEAG7011 – Food Packaging Technology (AGE)

Time: 3 hrs

Maximum: 70 Marks

Answer ALL Questions

The figures in the right hand margin indicate marks.

PART – A: (Multiple Choice Questions)

(1 x 10 = 10 Marks)

Q.1. Answer ALL questions

- a. Which of the following material is used as primary package in bread?

(i) LDPE	(ii) HDPE
(iii) PS	(iv) PVC
- b. Which of the following is used for packaging of milk in pouches

(i) Polyvinyl	(ii) Polyethylene Terephthalate
(iii) Polyethylene	(iv) Polyester
- c. Which of the following metal is not used in Food Packaging

(i) Aluminium	(ii) Tin
(iii) Iron	(iv) Chromium
- d. _____ is used as protective layer of steel

(i) Chromium	(ii) Aluminium
(iii) Boron	(iv) Iron
- e. _____ is added to Aluminium to improve strength of the alloy

(i) Magnesium	(ii) Titanium
(iii) Chromium	(iv) Tin
- f. What are the characteristics of Glass used as packaging container.....

(i) Made from recycled paper and often contains impurities and impurities	(ii) Acid treated pulp
(iii) Grease proof, very dense sheet with a very smooth and glossy finish	(iv) The strongest of all the papers commonly used for bags and wrapping
- g. The packaging materials used in flexible packaging are.....

(i) Glass, Metal and Plastic containers	(ii) Lined carton
(iii) Folding cartons	(iv) Aluminium foil
- h. The term “Blow moulding” is used during the production of

(i) Metal can	(ii) Plastic bottle
(iii) Plastic laminates	(iv) All of the above
- i. Which of the following Plastic Polymer is used for chips packaging_____

(i) PVDC	(ii) PP
(iii) PE	(iv) LDPE
- j. _____ is added to Aluminium alloys to reduce the coefficient of expansion

(i) Zinc	(ii) Nickel
(iii) Magnesium	(iv) Chromium

PART – B: (Short Answer Questions)

(2 x 10 = 20 Marks)

Q.2. Answer ALL questions

- a. State the advantages of coating of cans and express the type of coating
- b. Describe the characteristics of Polypropylene (PP) plastic use as packaging material
- c. Define Thermoset and Thermoplastics as packaging material
- d. State the important properties of Polyester film (PS) as packaging material
- e. Write down the different methods of Blow moulding in manufacturing plastic films
- f. Define Laminates film and Co-extruded films as packaging material
- g. Write the difference between Calendaring and Rotational moulding process for manufacturing of plastic film
- h. Write examples of shipping containers and retail containers
- i. Explain in brief the injection moulding Technique of manufacturing plastic film
- j. State the classification of thermoplastic materials which have got extensive application in packaging

PART – C: (Long Answer Questions)

(10 x 4 = 40 Marks)

Answer ALL questions

	Marks
3. a. Describe the characteristic and use of High-Density Polyethylene (HDPE)	06
b. Enlist the other plastic films use as packaging materials with its characteristics	04
(OR)	
c. Describe the characteristics and use of Flexible Film of Plastic	05
d. Express the characteristics and use of Low Density Polyethylene (LDPE)	05
4. a. Enlist the methods of manufacturing of plastic films	06
b. Explain Thermoforming methods of manufacturing of plastic films	04
(OR)	
c. State the advantages and disadvantages of Tin Free Steel cans (TFS)	06
d. Describe Conventional 3-piece can of Aluminium	04
5. a. Describe in details Polyvinyl Chloride (PVC) as a versatile packaging material.	05
b. Express the Advantages of Metal containers over other types of containers	05
(OR)	
c. Enlist the types of Aluminium Package forms	05
d. Describe the characteristics of Aluminium use in Food Packaging	05
6. a. Express the Advantages and Disadvantages of Aluminium containers	06
b. State the advantages of Shrink package	04
(OR)	
c. Explain Blow Moulding Methods of Explain Thermoforming methods of manufacturing of plastic films	06
d. Enlist the different groups of condensation polymer and describe its characteristics	04

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