

B.Tech. Sixth Semester (Polymer (Plastic) Tech.) (CGS)
11124 : Elective-II : Packaging Technology : 6 FEPP 05

P. Pages : 2

Time : Three Hours



AU - 2811

Max. Marks : 80

- Notes :
1. Answer **three** question from Section A and **three** question from Section B.
 2. Due credit will be given to neatness and adequate dimensions.
 3. Diagrams and chemical equations should be given wherever necessary.
 4. Illustrate your answer necessary with the help of neat sketches.
 5. Discuss the reaction, mechanism wherever necessary.
 6. Cell phone is not allowed.
 7. Use of pen Blue/Black ink/refill only for writing the answer book.

SECTION - A

1. a) What do you mean by packaging? Explain in detail selection criteria of packaging materials. 7

- b) Explain in detail rigid packaging and it's significance. 7

OR

2. a) What is the need and purpose of packaging? 7

- b) Explain in detail flexible packaging and it's significance. 7

3. a) Discuss in detail about life cycle assessment mode during selection of packaging material. 6

- b) State the aspects considered during package selection, while in development stage. 7

OR

4. a) Explain child resistance packaging in detail. 6

- b) State importance of reduce, reuse and recycle (3R) regarding waste management. 7

5. Explain in detail effect of following factors during package design. 13

- i) Chemical effect of gases.
- ii) Presence of vapour and oxygen.
- iii) Size / weight
- iv) Volume.

OR

6. Explain in detail package design aspect in relation to 13

- i) Product - package characteristics.
- ii) Compatibility factor.
- iii) Product type v/s packaging requirement.

SECTION - B

7. a) Explain in detail effect of packaging material characteristics during selection of material. 7
b) Explain significance of absorption and diffusion of moisture while selecting material. 7

OR

8. a) Explain the importance of permeability and barrier properties during selection of packaging material. 7
b) What is the effect of molecular orientation on mechanical properties of a packaging material? 7
9. a) How would you select a packaging material on the basis of odour and flavour? State with the help of suitable examples. 6
b) Explain in detail the different packaging material selection and evaluation criteria for an ideal pack. 7

OR

10. Explain in detail with examples the packaging material selection criteria and evaluation process based on following - 13
i) Tear strength.
ii) Sensitivity to microbes
iii) Chemical resistance characteristics
iv) Material weight and package dimension.
11. a) Explain in detail the working of bottle filling lines used during packaging. 6
b) Explain with examples the packaging used for export of Mango and Banana. 7

OR

12. a) State the significance of Ecofriendly packaging. 7
b) Explain importance of biodegradable packaging. 6
