17654

21718

3 Hours / 100 Marks Seat No. | | | | | | | | |

Instructions : (1) All Questions are *compulsory.*

(2) Answer each next main Question on a new page.

(3) Illustrate your answers with neat sketches wherever necessary.

(4) Figures to the right indicate full marks.

(5) Assume suitable data, if necessary.

(6) Abbreviations used, convey usual meaning.

Marks

1. Answer any FIVE : **5 × 4 = 20**

(a) Explain the role of plastics in packaging.

(b) Describe feed-stock recycling.

(c) Compare : LDPE and HDPE.

(d) Describe vibration test method for plastics.

(e) Explain any two distribution hazards of plastic packaging.

(f) (i) Describe thermoform fill sealing technique. **3**

(ii) State its two applications. **1**

(g) PVDC is widely used in Packaging. Explain.

2. Answer any FOUR : **4 × 4 = 16**

(a) Explain use of bulk and heavy duty bags in plastic packaging.

(b) Name various grades of polystyrene used in packaging. State their applications.

(c) State food packaging legalization and regulations.

(d) Describe 'shrink wrap'. Explain its use.

(e) Explain important advantages of plastic packaging.

(f) Write down important properties of 'PC' and applications with respect to packaging.

3. Answer any FOUR : **4 × 4 = 16**

(a) 'Care and precautions are to be taken in using recycled plastics for food packaging.' Explain.

(b) Enlist important characteristics and applications of 'EVA' used for packaging.

(c) Describe method to evaluate seals in flexible packaging.

(d) Explain the use of drums and containers for bulk packaging of solvents and chemicals.

(e) Explain shrink wrapping process for plastic packaging.

(f) State the special requirements and materials for medical packaging.

4. Answer any FOUR : **4 × 4 = 16**

(a) Explain recycle rate for plastics packaging.

(b) State important characteristics of flexible packaging.

(c) Describe pallet wrapping process for plastics packaging.

(d) Explain the purpose of (i) Lamination, (ii) Metallisation in plastics.

(e) Elaborate : (i) Retort pouches

(ii) Standup pouches

(f) Describe aspectic blow moulding process.

5. Answer any FOUR : **4 × 4 = 16**

(a) Describe blister packaging method for pharmaceutical tablet packaging.

(b) Explain principle of vacuum and gas packaging.

(c) Explain environmental considerations related for plastic packaging materials.

(d) Describe process for coinjection blow moulded bottles.

(e) Explain the role of Biodegradable plastics in packaging.

(f) Describe the process of thermal lamination with a diagram.

6. Answer any FOUR : **4 × 4 = 16**

(a) Describe skin packaging process.

(b) Enlist conversion processes. Explain any one.

(c) Describe injection moulding process for friction closures lid and cap.

(d) 'Recycling of plastic material is necessary.' Justify.

(e) Write down stepwise procedure for stack load testing.

(f) Describe foam blow moulding process.
