

22489

22223

3 Hours / 70 Marks

Seat No.

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- 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) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.
(7) Abbreviations used are their usual meaning.

Marks

1. Attempt any FIVE of the following:

10

- State any two properties and two applications of PE in packaging.
- Enlist any four advantages of polymers in packaging.
- State the full form of PVDC, EVA, EVOH and PVC.
- Enlist any four advantages of flexible packaging.
- State any two advantages and two applications of skin packaging.
- Draw neat figure of extrusion blow moulding for bottle.
- State any four materials used for blister packaging.

P.T.O.

- 2. Attempt any FOUR of the following:** **12**
- a) State any three functions of packaging.
 - b) Enlist any three properties and three applications of PP in packaging.
 - c) Explain with neat figure the cast film extrusion process.
 - d) Describe dry adhesive lamination process with neat figure.
 - e) Describe aseptic packaging. State its two advantages.
- 3. Attempt any FOUR of the following:** **12**
- a) Explain with neat figure the vacuum forming.
 - b) Describe plug-assist forming with neat figure.
 - c) Explain construction of pillow pouches with neat sketch.
 - d) Describe pad printing method with neat figure.
 - e) Explain band sealing with neat figure.
- 4. Attempt any THREE of the following:** **12**
- a) Explain three side seal pouches and four side seal pouches with neat sketch.
 - b) Describe drop test for packaging.
 - c) State any four packaging hazards with their control methods.
 - d) Enlist four properties and four applications of PS in packaging.
 - e) Describe wet adhesive lamination process with neat figure.
- 5. Attempt any THREE of the following:** **12**
- a) Explain with neat figure the blown film extrusion process.
 - b) Describe multilayer film extrusion process with neat figure.
 - c) Explain with neat figure the injection blow moulding for rigid packaging.
 - d) Describe bubble forming method with neat figure for rigid packaging.
 - e) Explain matched mould forming process with neat figure for rigid packaging.

6. Attempt any TWO of the following:**12**

- a) Explain with neat figure the screen printing for decoration of packaging.
 - b) Describe induction sealing with neat figure.
 - c) Explain stack load test for packaging also discuss packaging hazards and their controls.
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