

22454

11920

3 Hours / 70 Marks

Seat No.

--	--	--	--	--	--	--	--

- Instructions* – (1) All Questions are *Compulsory*.
- (2) Illustrate your answers with neat sketches wherever necessary.
- (3) Figures to the right indicate full marks.
- (4) Assume suitable data, if necessary.
- (5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

- 1. Attempt any FIVE of the following: 10**
- State any two applications of EVOH as a packaging material.
 - State any two special requirements for food packaging.
 - Enlist name of any two flexible packaging products.
 - State any two applications of PV foam for packaging.
 - Enlist name of any two plastic material used for manufacturing shrink films.
 - State any two packaging hazards.
 - State any two control measures over packaging hazards.
- 2. Attempt any THREE of the following: 12**
- Explain the various criteria's for selection of packaging materials.
 - State the function and advantages of Plastics packaging.
 - Explain in brief modified atmosphere packaging.
 - With suitable sketch describe extrusion lamination process.

P.T.O.

- 3. Attempt any THREE of the following:** **12**
- a) Describe processing of expanded PS foam for packaging a product.
 - b) Explain in brief blister packaging.
 - c) With suitable sketch explain thermoform fill seal system.
 - d) Explain in brief plug assist forming process.
- 4. Attempt any THREE of the following:** **12**
- a) Explain aseptic packaging for food products.
 - b) With suitable sketch explain induction sealing.
 - c) Explain in brief any two types of Pouch.
 - d) Elaborate characteristics of stretch wrapping material.
 - e) Explain migration test of plastics packaging.
- 5. Attempt any TWO of the following:** **12**
- a) Describe blown film Extrusion process with neat sketch.
 - b) With suitable sketch explain screen printing and hot stamping process.
 - c) Explain in brief drop test for testing one litre water bottle.
- 6. Attempt any TWO of the following:** **12**
- a) State any three properties and applications of following plastics materials.
 - (i) PET
 - (ii) PP
 - b) Describe in brief extrusion blow moulding process for manufacture of 5 litre oil can.
 - c) With suitable sketch describe Vacuum metallization process.
-