

22387

12425

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

- (a) Enlist two types of testing.
- (b) State the full form of ASTM and ISO.
- (c) Define stress and strain.
- (d) Define thermal conductivity.
- (e) Define refractive index.
- (f) Define dielectric strength.
- (g) Enlist any four chemical properties measurement test methods.

2. Attempt any THREE of the following :

12

- (a) State any four reasons for testing and four importance of testing.
- (b) Explain with neat figure the stress-strain curve for any two type of polymeric material.
- (c) Describe spiral mold test method with neat figure.
- (d) Explain with neat figure the measurement of volume resistivity of polymer material.



- 3. Attempt any THREE of the following : 12**
- (a) Explain with neat figure the preparation of test specimen for tensile strength test.
 - (b) Describe cup flow test method for thermoset with neat figure.
 - (c) Explain with neat figure the measurement of surface resistivity of polymer material.
 - (d) Explain with neat figure the immersion test method.
- 4. Attempt any THREE of the following : 12**
- (a) Describe test procedure for flexural strength test with neat figure.
 - (b) Explain with neat figure differential scanning calorimeter.
 - (c) Describe test procedure for melt flow index test.
 - (d) Explain the accelerated outdoor test for exposure of polymer to UV lamp.
 - (e) Describe the test procedure for resistance of polymer to fungi.
- 5. Attempt any TWO of the following : 12**
- (a) Explain with neat figure the test procedure for Izod impact test.
 - (b) Describe the test procedure for measurement of thermal conductivity of polymer material with neat figure.
 - (c) Explain with neat figure the measurement of specular gloss of polymer material.
- 6. Attempt any TWO of the following : 12**
- (a) Explain with neat figure the test procedure for abrasion resistance test.
 - (b) Describe test procedure for oxygen index test method.
 - (c) Explain with neat figure the measurement of dielectric constant of polymer material.
-