

Printed Pages:02

Sub Code: MTPL 202

Paper Id:

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M.TECH (PLASTICS ENGINEERING)
(SEM II) THEORY EXAMINATION 2017-18
TESTING & QUALITY CONTROL OF PLASTICS

Time: 3 Hours

Total Marks: 70

- Note:** 1. Attempt all Sections. If require any missing data; then choose suitably.
2. Any special paper specific instruction.

SECTION A

1. Attempt *all* questions in brief. **2 x 7 = 14**

- (a) Define Luminous Transmittance and also write how it is different from Clarity.
- (b) At what temperature & Load MFI measurement for HDPE done as per ASTM D 1238.
- (c) What is the significance of notch in the notched Izod Impact strength
- (d) Define Volume and Surface Resistivity of plastics.
- (e) Name the equipment used to measure Coefficient of Linear Thermal Expansion
- (f) What is Stress Relaxation
- (h) What is the difference between HDT and VSP.

SECTION B

2. Attempt any *three* of the following: **7 x 3 = 21**

- (a) Discuss the classification of tests used for plastic materials.
- (b) What do you understand by Standards and Specification.
- (c) Explain the Stress -Strain curve for Brittle material.
- (d) What is Weathering? Explain the features of Weatherometer.
- (e) Write down the significance of electrical properties and explain the dielectric strength testing.

SECTION C

3. Attempt any *one* part of the following: **7 x 1 = 7**

Write short note on

- (a) Explain Creep test and its Significance
- (b) Explain Martens Heat stability of Plastic materials

4. **Attempt any *one* part of the following:** **7 x 1 = 7**
- (a) Difference between Haze and Gloss
 - (b) Difference between Compressive strength and Shear Strength
5. **Attempt any *one* part of the following:** **7 x 1 = 7**
- (a) Write in detail about Oxygen Index Flammability (OIT) tests of plastic materials
 - (b) Explain in detail about ESCR testing of plastics materials
6. **Attempt any *one* part of the following:** **7 x 1 = 7**
- (a) Define Hardness. Write various methods of measuring hardness of plastics
 - (b) Explain MFI Testing of Plastics materials and factors affecting on test results.
7. **Attempt any *one* part of the following:** **7 x 1 = 7**
- (a) Explain the Principle of NDT (Non Destructive Test). Summarize the v method
 - (b) Write down the importance of National and International Standards