

SECTION-A

Note: Multiple choice Questions. All Questions are compulsory. (6x1=6)

- Q.1 IN a charpy test, high hammer velocity ensures _____.
a) High strain rate b) Local stresses
c) Ductility in fracture d) Low stress concentration
- Q.2 ASTM D2240 is the standard for _____ test
a) Tensile Test
b) Rockwell hardness test
c) Durometer hardness test
d) Brinell hardness test
- Q.3 The tendency of a deformed solid to regain its actual proportions instantly upon unloading known as _____.
a) Perfectly elastic b) Delayed elasticity
c) Inelastic effect d) Plasticity
- Q.4 What is the deformation per unit length?
a) Strain b) Stress
c) Toughness d) Resilience

- Q.5 _____ is the ability of a material to sustain impact forces without fracture
 a) Impact strength b) Toughness
 c) Tensile strength d) Compressive strength
- Q.6 ASTM D790 is the standard for _____ test.
 \ a) Tensile test b) Flexural test
 c) Flame test d) MFI

SECTION-B

Note: Objective/Completion type questions. All questions are compulsory. (6x1=6)

- Q.7 The weight of melt in grams flowing through the capillary in 10 minutes is known as _____.
- Q.8 SQC stands for _____.
- Q.9 Expand HDT.
- Q.10 Name two short term mechanical properties.
- Q.11 Define Vicat softening point.
- Q.12 Expand ASTM.

SECTION-C

Note: Short answer type Questions. Attempt any eight questions out of ten Questions. (8x4=32)

- Q.13 Explain basic concept of statistical quality control.
- Q.14 Explain Dart impact test for films.
- Q.15 Discuss
 a) Tear test b) Water absorption test

- Q.16 Discuss light transmittance test.
- Q.17 Discuss flame test for identification of plastic
- Q.18 Explain refractive index test for plastics.
- Q.19 Explain Limiting oxygen index test for plastics.
- Q.20 Explain flexural or fatigue bending test for plastics.
- Q.21 Discuss accelerated weathering tests.
- Q.22 Discuss colour measurement and gloss test for plastics.

SECTION-D

Note: Long answer questions. Attempt any two questions out of three Questions. (2x8=16)

- Q.23 Explain
 a) Melt flow index test
 b) Volume and surface resistivity test
- Q.24 Explain with neat sketch, various types test with standard and specifications.
 a) vicat softening point
 b) Solubility test for identification of plastics
- Q.25 Discuss
 a) Creep & stress relaxation
 b) Rock well Hardness test