

Scheme – I
Sample Question Paper

Program Name : Diploma in Plastics Engineering
Program Code : PS
Semester : Third
Course Title : Testing and Quality Management for Plastics
Marks : 70

22350

Time: 3 Hrs.

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) Preferably, write the answers in sequential order.

Q.1) Attempt any FIVE of the following.

10 Marks

- a) State the importance of testing.
- b) Define abrasion resistance.
- c) State the types of testing.
- d) Define arc resistance.
- e) List any two test methods for measuring the thermal properties of plastic.
- f) State significance of compressive test.
- g) State principle of TGA.

Q.2) Attempt any THREE of the following.

12 Marks

- a) Describe the role and functions of ASTM organization.
- b) Identify the factors and its effect on flexural strength of plastic.
- c) Explain - DSC for measurement of thermal properties.
- d) Describe in details test procedure for finding dielectric strength with neat diagram.

Q.3) Attempt any THREE of the following.

12 Marks

- a) State any four factors affecting Izode Impact strength of Plastic.
- b) Enlist and explain any one test method to determine flow property of Plastic material.

- c) Describe the test method to determine haze.
- d) Describe the test procedure for finding solvent stress cracking resistance of plastics.

Q.4) Attempt any THREE of the following.

12 Marks

- a) Suggest & explain the test method to find out effect of compressive force on Plastic product.
- b) Explain the test procedure of Vicat softening point method.
- c) Explain dissipation factor and State its significance
- d) Identify and explain the test method to find out the effect of bacteria on Plastic.
- e) State any four factors affecting the test result of optical properties measurement.

Q.5) Attempt any TWO of the following.

12 Marks

- a) Define hardness, Explain shore –A method to measure hardness of plastic.
- b) Explain the test procedure to measure tensile strength of Plastics and state factors affecting on test results.
- c) Identify and explain the test procedure to measure Tg of Plastic.

Q.6) Attempt any TWO of the following.

12 Marks

- a) Explain melt flow index test with neat sketch and State its significance.
- b) Define dielectric constant, Explain method to measure dielectric constant.
- c) Describe UV lamp test method for measurement of weathering properties.

Scheme – I
Sample Test Paper - I

Program Name : Diploma in Plastics Engineering
Program Code : PS
Semester : Third
Course Title : Testing and Quality Management for Plastics
Marks : 20

22350

Time: 1 Hour

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) Preferably, write the answers in sequential order.

Q.1 Attempt any FOUR.

08 Marks

- a) State the need of testing.
- b) State any four standards organizations.
- c) Define density and state its unit.
- d) State significance of flexural test.
- e) Define hardness and state its types.
- f) Define Creep.

Q.2 Attempt any THREE.

12 Marks

- a) State the factors affecting tensile test result.
- b) Define testing and state its importance.
- c) Explain shore- D test method to determine hardness of Plastic.
- d) Describe the ASTM Organization.
- e) Explain test method to determine specific gravity of Plastic material
- f) Explain test procedure of Abrasion resistance of Plastic.

Scheme – I
Sample Test Paper - II

Program Name : Diploma in Plastics Engineering
Program Code : PS
Semester : Third
Course Title : Testing and Quality Management for Plastics
Marks : 20

22350

Time: 1 Hour

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) Preferably, write the answers in sequential order.

Q.1 Attempt any FOUR.

08 Marks

- a) Define volume resistivity.
- b) Enlist the test methods to find out weathering properties of Plastics.
- c) State the characteristics of good insulator.
- d) Define haze
- e) State significance of TGA
- f) Define dielectric constant.

Q.2 Attempt any THREE.

12 Marks

- a) Explain HDT test method to determine the thermal conductivity of Plastics.
- b) Describe the test procedure to find the surface resistivity of Plastics.
- c) Describe the cup flow test for Thermosets.
- d) Explain the test method to determine dielectric strength of Plastics.
- e) Suggest and explain the test method to determine the resistance of Plastic to fungi.
- f) Explain the test method for measurement of Refractive index