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** **Time: 3 Hrs.**

22350

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**

22350

Semester : **Third**

Course Title : **Testing and Quality Management for Plastics**

Marks : **20** **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**

22350

Semester : **Third**

Course Title : **Testing and Quality Management for Plastics**

Marks : **20** **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