Q.33 Explain Surface finish used in plastic product design.

Q.34 Discuss fillet and radius.

Q.35 Discuss solvent cementing and adhesion.

Section-D

Note: Long answer Questions. Attempt any two Questions out of three Questions. (2x10=20)

Q.36 Explain various preliminary design considerations for plastic product design.

Q.37 Discuss in detail the various materials and their selection for particular application in plastic product design.

Q.38 Write short note on :

a) Cost economics and its effect on plastic product design.

B) Explain importance of uniforms wall thickness in plastic design.

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6th Sem,

Branch : Plastic, Chem Engg (SPL Polymer Tech)

Subject : Plastic Product Design

Time : 3 Hrs. **M.M. : 100**

SECTION-A

Note : Multiple choice questions. All questions are compulsory. (10x1=10)

Q.1 PLC stands for _____.

a) Product life circle b) Product life cycle

c) Plastic life circle d) Product last cycle

Q.2 The aim of feasibility study is _____.

a) To determine sources and profitability of organisation

b) To improve mould design.

c) To give reaction in polymers

d) None of the above

Q.3 Which of the following is not a type of welding?

a) Ultrasonic b) Induction

c) Hot gas d) Rivet

Q.4 The Plastic should have _____ wall thickness.

a) Uniform b) Non uniform

c) Irregular d) None of these

Q.5 What frequency is used in high frequency welding technique?

a) 80Hz b) 50hz

c) 20Hz d) 150Hz

Q.6 Minimum radius given in fillets for any plastic product design is _____

a) 3/8 inch b) ½ inch

c) 1/4 inch d) 1 inch

Q.7 Which part of the moulding process determines the diameter and wall thickness of product?

a) Molten plastic b) Die gap

c) Mold cavity d) Blow pin

Q.8 What must be avoided while designing mould component in blow moulding?

a) Radii b) Bend

c) Fillet d) Sharp corners

Q.9 Name the solvent used for PVC

a) MEK b) MCI

c) Benzene f) Ethanol

Q.10 Which the most difficult shape to prepare?

a) Artistic shapes b) Engineering shapes

c) Plain utility d) None of the above

Section B

Note: Objective types Questions. All Questions are compulsory. (10x1=10)

Q.11 Give one function of gate.

Q.12 Name two optical properties of plastics.

Q.13 Name different types of undercut.

Q.14 Draw any one insert for plastic molding.

Q.15 Name two permanent joining methods used in plastic assembly.

Q.16 Name two main types of moulded inserts.

Q.17 DMF stands for _____.

Q.18 Give two advantages of Ribs.

Q.19 Name two types of holes used in plastic designs.

Q.20 Name various shapes uses in plastic product designs.

Section-C

Note: Short answer type Questions. Attempt any twelve Questions out of fifteen Questions. (12x5=60)

Q.21 Explain product life cycle and its stages.

Q.22 What is feasibility study and how it is important for any organization.

Q.23 Explain hot gas welding.

Q.24 Discuss various type of threads used in plastic product design.

Q.25 Explain gate side and its location.

Q.26 Discuss the causes and remedies for weld line defect.

Q.27 Explain Assembly methods.

Q.28 Suggest various plastics materials used for preparation of plastic gear.

Q.29 Discuss texturing and its importance.

Q.30 Explain various types of holes and their positioning with diagram.

Q.31 Discuss need and importance of uniform wall thickness of plastic product design.

Q.32 Discuss Friction welding of plastics.