Q.19 Describe the safety measures that should be taken during mould maintenance. (CO7)

Q.20 Discuss the procedures for storing moulds and their significance. (CO8)

Q.21 Explain the use of CAD software in mould design and its advantages. (CO9)

Q.22 Explain thermoforming process. (CO1)

SECTION-D

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

Q.23 What are the primary differences between thermoplastic and thermosetting plastics, and how do these differences impact their industrial applications? (CO1)

Q.24 Explain the different elements of injections mould and their functions. (CO5)

Q.25 Explain the following: (CO2)

a) Pre-moulding Technique

b) Classification of blow mould

No. of Printed Pages : 4 222026

Roll No. .....

2nd Year / Advance Diploma in Tool & Die Making

Subject : Tool Design - II (Plastic Moulds)

Time : 3 Hrs. M.M. : 60

SECTION-A

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

Q.1 Which classification of plastics includes materials that can be re-melted and re-moulded? (CO1)

a) Thermoplastic b) Thermoplastic

c) Stabilizers d) Pigments

Q.2 What is the primary advantage of injection moulding over compression moulding? (CO2)

a) Lower material cost

b) Faster cycle time

c) Greater design flexibility

d) Suitable for thermosetting plastic

Q.3 In plastic moulding, what is the function of post-moulding techniques? (CO3)

a) Shaping the mould

b) Trimming excess material

c) Controlling mould temperature

d) Preparing the mould cavity

Q.4 What is the purpose of the runner in an injection mould? (CO5)

a) To eject the moulded part
b) To cool the mould
c) To provide a pathway for molten plastic
d) To create a parting surface

Q.5 Which design parameter for plastic material refers to its weight per unit volume? (CO4)

a) Specific gravity
b) Shrinkage value
c) Heat content
d) Moulding temperature

Q.6 In an injection moulding machine, what is the function of the clamping force? (CO6)

a) Plasticizing the material
b) Injecting the material into the mould
c) Holding the mould halves together
d) Cooling the moulded part

SECTION-B

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

Q.7 Cooling channels is a mould help regulate the mould temperature, ensuring proper parts solidification (True/False) (CO5)

Q.8 When designing a mold, it's important to consider_____to ensure that the final part meets the exact or desired dimensions. (CO3)

Q.9 CAD software is commonly used to design 3D models of plastic components for_____.(CO15)

Q.10 The primary function of the_____ system in plastic injection molding is to control the flow of molten plastic (CO3)

Q.11 The **primary function** of post-moulding techniques is to shape the mould cavity. (True/False) (CO5)

Q.12 Simulation packages in plastic moulding are used to optimize the_____process. (CO8)

SECTION-C

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

Q.13 What are the key properties of plastic materials. (CO1)

Q.14 Explain the advantages and disadvantages of compression moulding. (CO2)

Q.15 Describe the cooling system in an injection mould and its importance. (CO3)

Q.16 Discuss the different types of injection mould designs based on daylight, ejection, and feed systems. (CO4)

Q.17 Calculate the total cycle time for an injection moulding process and explain its components. (CO5)

Q.18 Explain the role of shrinkage value in material selection for moulding. (CO6)