Q.17 Discuss the significance of the parting surface in mould design. How does the choice of parting surface impact the moulding process? CO6

Q.18 Explain the purpose and operation of a hot runner system in injection moulding. CO9

Q.19 Describe the procedure for estimating moulding cost per unit. CO11

Q.20 Discuss the importance of safety measures in plastic moulding operations. CO7

Q.21 Explain the requirement of mould polishing and surface treatment. CO5

Q.22 Discuss the role simulation packages in plastic moulding. CO8

SECTION-D

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

Q.23 Describe the key design consideration for an injection mould used in the mass production of complex plastic components. CO4

Q.24 Discuss the concept of allowances, gating system, cooling and ejection system of injection mould. CO3

Q.25 Explain the following :

a) Transfer moulding process CO2

b) Post moulding techniques CO5

(Note : Course outcome/CO is for office use only)

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Roll No. .....

2nd Year / Advance Diploma in Tool & Die Making

Subject:- Tool Design - II

(Plastic Moulds)

Time : 3Hrs. M.M. : 60

SECTION-A

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

Q.1 Which moulding process involves forcing a plastic material through a die to create continuous shapes? CO2

a) Blow moulding

b) Thermoforming

c) Extrusion moulding

d) Compression moulding

Q.2 In plastic injection moulding, what is the primary function of the runner system? CO3

a) To cool the mould

b) To hold the mould halves together

c) To provide a passage for molten plastic into the mould cavity

d) To eject the moulded part

Q.3 What is the primary function of the mold housing and bases? CO9

a) Cooling the mold
b) Providing clamping force
c) Supporting the mold components
d) Ejection the molded part

Q.4 In an injection mold, what is the primary function of the sprue? CO3

a) Cooling the mold
b) Ejection the molded part
c) Providing a passage for molten plastic into the mold cavity
d) Holding the mold halves together

Q.5 What is the primary role of the core and cavity in an injection mould? CO3

a) To cool the mould
b) To hold the mould halves together
c) To shape the plastic material into the desired part
d) To eject the moulded part

Q.6 In mould design, what is the purpose of the parting surface? CO8

a) Cooling the mould
b) Separating the core and cavity
c) Ejection the moulded part
d) Controlling the flow of plastic

SECTION-B

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

Q.7 Define the term cavity in moulds. CO1

Q.8 Explain the purpose of the gate in an injection mould. CO3

Q.9 Blow molding is a process commonly used to manufacture hollow plastic products like bottles and containers. (True/False) CO4

Q.10 The primary function of post-molding techniques is to shape the mold cavity. (True/False) CO5

Q.11 Drafts and tapers are design parameters used to ensure easy ____ of plastic parts from the mold. CO3

Q.12 Polishing is an important surface treatment for mold parts, as it helps achieve the desired _____ and reduces friction during the molding process. CO5

SECTION-C

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

Q.13 Discuss the differences between thermoplastic and thermosetting plastics. CO1

Q.14 Explain the steps involved in the injection moulding process. CO2

Q.15 Describe the term maintenance, safety and storage with respect to mould and machine. CO7

Q.16 Compare the compression moulding and transfer moulding processes. CO5