Q.24 Explain the layout method of cavities.
Q.25 Give the procedure of estimation of machining hours.
Q.26 Write short note on data for machine setup.
Q.27 Give principle of drawing mould layout.
Q.28 Explain the relation between material and mould.
Q.29 Explain mould housing.
Q.30 Explain the methods of cost analysis and evaluation
Q.31 Describe balancing of runner and its importance.
Q.32 Classify feed system.
Q.33 Explain cooling and heating circuits in moulds.
Q.34 Explain various design parameters for optimum mould design?
Q.35 Describe the principle of component geometry.

SECTION-D

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

Q.36 If clamping force= 700 kN, the max injection volume with 350 no. of screws - 140 cm^3, and the max injection pressure with 350 screws= 1500 bar, determine the shot capacity of the injection unit.

Q.37 Write short note on :
a) Bill of material and selection of material for compression moulding process.
b) Concept of use of design data sheet

Q.38 Explain
a) Multi-cavity compression moulding
b) Layout (Assembly drawing) and detail Drawing Layout.

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3rd Year / Advance Diploma in Tool and Die Making
Subject:- Tool Design Practice - III (Plastic Moulds)

Time : 4Hrs. M.M. : 100

SECTION-A

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

Q.1 Which part is used for feeding in injection moulding?
a) Hopper b) Barrel
c) Screw d) All of the above

Q.2 The ratio of the density of a material after molding to the density of the raw material
a) Bulk factor b) Weight density
c) Mass density d) Factor of safety

Q.3 Which type of mould is found in molten state of plastic in all times?
a) Cold runner b) Hot runner
c) Two plate d) Three plate

Q.4 What is the name of the line which lies between two mould halves?
a) Parting line b) Centre line
c) Matching line d) Vertical line

Q.5 What is the function of a plunger in hand injection moulding machine?

a) Melt the material
b) Push the melt material in the mould
c) Cool the material
d) Eject the moulded part

Q.6 _____ is the process of imitation of real world process on computer.

a) Simulation b) Injection analysis
c) Process analysis d) AutoCAD software

Q.7 A handbook containing data or statistics for manufacturing processes is known as_____.

a) Data sheet b) Data book
c) Log Book d) Bill of material

Q.8 Any rubbery material composed of polymers, that are capable of recovering their original shape after being stretched are known as_____.

a) Plastics b) Thermosetting
c) Elastomers d) Thermoplastics

Q.9 Time elapsed between the beginning of one injection cycle and the next one is known as_____.

a) Setup time b) Curing time
c) Shrinkage time d) Cycle time

Q.10 What defect will be corrected when the wall thickness is increased in compression moulding process?

a) Burn b) Weld line
c) Shrinkage d) Flow mark

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 Write the principle of components geometry.

Q.12 _____ is the distance from the top of the bed to the bottom of the slide with stroke down and adjustment up

Q.13 The zone where some device is placed for holding it firmly is_____

Q.14 _____ process involves heating a polymer sheet of even thickness and drawing it over, or into a mould to form a rigid shape.

Q.15 Give advantages of preheating the raw material in compression moulding?

Q.16 Define shrinkage

Q.17 Define assembly drawing

Q.18 List of the sub-components, sub-assemblies and the quantities of each needed to manufacture an end product is known as_____.

Q.19 What will happen if the part is sticking to the mould during ejection?

Q.20 _____ is the excess material flow out from mould in compression moulding?

SECTION-C

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

Q.21 Describe various allowances.

Q.22 Write short note on dimensional tolerances.

Q.23 Describe various data sheet formats.