

- Q.31 Describe layout for assembly moulds.
- Q.32 Describe Data sheets with examples
- Q.33 Explain principle of 3-D models of components.
- Q.34 Enlist materials for 4 mould parts.
- Q.35 Explain multi-cavity compression mouldings.

### SECTION-D

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

- Q.36 Calculate Total projected Area for polypropylene Container mould, Which has base, height of 58mm. It consists hot runner mould tool of 8 impressions. The cavity at split line has diameter of 80mm, cavity depth 58mm, cavity diameter at the base 50mm. The mould cavity base has thermal gate in the center. The components wall section is 1.6 mm.
- Q.37 Explain the method of cost analysis and evaluation with help of the suitable examples.
- Q.38 A product has projected area of 610 cm<sup>2</sup> and material is PE, how to Calculate clamping force in this projects injection moulding ? Assume safety factor as 10% KP. As 0.32, Assume other necessary constants and values.

**3<sup>rd</sup> Year / Advance Diploma in Tool & Die Making**  
**Subject:- Tool Design Practice-III (Plastic Moulds)**

Time : 4 Hrs.

M.M. : 100

### SECTION-A

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

- Q.1 Plastics are principal ingredient of which material
  - a) Paint
  - b) Varnish
  - c) Adhesive
  - d) All
- Q.2 Long plastic rods are produced by
  - a) Compression moulding
  - b) Extrusion
  - c) Injection moulding
  - d) Blow moulding
- Q.3 The plastics are processes in \_\_\_\_\_
  - a) one
  - b) Two
  - c) Three
  - d) Four
- Q.4 During transfer moulding, plastic material transfer into chamber called \_\_\_\_\_
  - a) Sprue
  - b) pot
  - c) mould cavity
  - d) none
- Q.5 Which is most common polymer type in fiber-reinforced polymer composites ?
  - a) Elastomers
  - b) Thermoplastic
  - c) Thermosets
  - d) Both a and b

- Q.6 \_\_\_\_\_ is replica of final product and used to prepare mould cavity
- a) Sprue                                      b) pattern  
c) Core                                        d) Riser
- Q.7 Which is not main constituent of Green sand mould
- a) Water                                        b) Clay  
c) Sand                                         d) Chalk
- Q.8 The dried plaster mould have
- a) Low permeability    b) High permeability  
c) Moderate permeability d) None of these
- Q.9 Purpose of adding wood flour to moulding sand is to improve
- a) Green strength            b) Hot strength  
c) Collapsibility              d) permeability
- Q.10 Which is not a Source of moulding sand ?
- a) Sea    b) Lakes  
c) Desert                                        d) forests

### SECTION-B

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

- Q.11 The zone where some device is placed for holding it firmly is \_\_\_\_\_
- Q.12 \_\_\_\_\_ is time lapse between beginning of an injection cycle and next one
- Q.13 Write examples of gating

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- Q.14 Define plastic moulds
- Q.15 Define Tool design engineering
- Q.16 Define the components drawings
- Q.17 Define the optimum designs
- Q.18 What is evaluation of conceptual designs ?
- Q.19 Define the feed system layouts
- Q.20 Define the bill of materials .

### SECTION-C

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

- Q.21 Explain detail drawing layouts
- Q.22 Explain feature of material properties of the moulds.
- Q.23 Describe standard catalogues.
- Q.24 Describe Mould bases.
- Q.25 Describe nomenclature of standard elements.
- Q.26 Explain principles of layout of cavities.
- Q.27 Explain typical circuit layouts.
- Q.28 Explain Quantity requirement pertaining to materials
- Q.29 Describe Data sheet formats.
- Q.30 Describe evaluation of conceptual designs.

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