Q.24 Explain Bolster plate and its types.

Q.25 Explain runner-less mould.

Q.26 Discuss side splits and their types.

Q.27 Discuss ejection from fixed half.

Q.28 State criteria for selection of parting surface

Q.29 Explain side core and side cavities for internal undercuts.

Q.30 Explain in line grid ejection.

Q.31 Discuss various materials used for dies and mould.

Q.32 Draw labelled diagram of two plate mould.

Q.33 Discuss runner size and balancing.

Q.34 Discuss mould for threaded components.

Q.35 Explain any three gates and their types.

SECTION-D

Note : Long Answer type question. Attempt any two questions. (2x10=20)

Q.36 Draw neat sketch of three plates mould and also explain its various parts and their functions.

Q.37 Discuss:

a) Ejection techniques.

b) Water connections and its types.

Q.38 Write short note on:

a) Angle lifts splits and its types.

b) Cooling integer type moulds.

5th Sem / Plastic Engineering
Subject : Design of Dies & Moulds-1

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

SECTION-A

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

Q.1 Which of the following material is not used for mold making?

a) Iron b) Zinc

c) Mild Steel d) Alloy Steel

Q.2 Line which is formed by joining of core and cavity is known as _____.

a) Thin line b) Parting line

c) Weld line d) Parallel line

Q.3 The female portion of a mould that shapes the outer part of the product is known as_____

a) Core b) Cavity

c) Runner d) Gate

Q.4 Function of sprue puller is to _____

a) Eject component

b) To fill gap

c) To remove sprue from its bushing

d) None of these

Q.5 The size of the runner depends on the size of the part and its wall thickness.

a) True

b) Depends on both

c) Does not depends on any of them

d) False

Q.6 _____ type of cooling is used in plastic moulds.

a) Air b) water

c) Oil d) All of them

Q.7 _____ are a means to enable tool to be fitted to the injection moulding machine.

a) Bolster plate b) Buffer plate

c) Support plate d) All of them

Q.8 _____ of runner is important for uniform cavity filling

a) Fencing b) Balancing

c) Tapering d) None of these

Q.9 The main function of _____ plate is to lock the heads of the pins so they don't come out during the injection molding process.

a) Bolster plate b) Buffer plate

c) Ejector retainer plate d) All of them

Q.10 _____ apply force to eject a part from the mould, and in some cases can leave marks.

a) Puller rod b) Sprue puller

c) Ejection pin d) All of these

SECTION-B

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

Q.11 Define function of gates.

Q.12 _____ is used as coolant for moulds.

Q.13 Name two mould materials.

Q.14 _____ is provided to remove excess air from the mould.

Q.15 _____ is formed by meeting of core and cavity.

Q.16 _____ is a channel that directs the molten plastic from the sprue to the cavity gate.

Q.17 Expand CNC.

Q.18 The end of the runner in any mould is the _____ which is the point of entry of the molten, material into the cavity of the mould.

Q.19 Sharp corners and edges encourage _____ in the mould.

Q.20 The gate near the long and thin core should be (avoided/preferred)

SECTION-C

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

Q.21 Discuss various factors needed for deciding the size of runner.

Q.22 Discuss water connection and its types.

Q.23 Explain function of sprue pillar.