

- Q.23 Discuss mould for threaded components.
 - Q.24 State various considerations of mould material.
 - Q.25 Explain runner less mould.
 - Q.26 What is sprue-puller? Discuss its role in ejection system.
 - Q.27 Explain side core cavities for internal undercuts.
 - Q.28 Explain frame type ejector grid.
 - Q.29 Explain Z-Type of cooling.
 - Q.30 Explain ejector grid.
 - Q.31 What is sprue puller? Explain its importance.
 - Q.32 Explain multi daylight moulds.
 - Q.33 Discuss criteria for selection of parting surface.
 - Q.34 Explain functions of gate.
 - Q.35 Discuss advantages of Runner less mould.

SECTION-D

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

- Q.36 Explain any one feed system used in plastic mould design, stating the importance of runner, gates and impressions (also draw sketch for the same).

Q.37 Discuss :

 - Types of parting surface and its relief.
 - Various types of gates with diagram

Q.38 Write short note on :

 - Cooling insert bolster assembly and its types
 - Angle lifts splits and its types

No. of Printed Pages : 4 182254/122254/
Roll No. 127054/032242

**5th Sem / Branch : Plastic, Chem. Engg.
(Spl. Polymer Engg.)
Sub.: Design of Dies and Moulds-I**

Time : 3Hrs. M.M. : 100

SECTION-A

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

- Q.1 The defects of partial filling of a mould cavity or cavities is called _____.
a) Flash b) Short shot
c) Shark skin d) None of these

Q.2 A thin piece of plastic material that typically forms along the parting line of a moulded part is called _____.
a) Flash b) Gloss
c) Tail d) None of these

Q.3 _____ of runner is important for uniform cavity filling.
a) Fencing b) Balancing
c) Tapering d) None of these

Q.4 In gating system ratio 1:2:4 represents _____.
a) Sprue base : runner areas: gate size
b) Runner area : sprue base: Gate size
c) Sprue base gate size: runner area
d) None of these

Q.5 Bars placed between the support plate and the bottom clamping plate, bolted to the bottom

clamping plate, are used as additional support for the core retainer plate.

- a) Guide Map
- b) Guide Pillar
- c) Guide Bush
- d) None of these

Q.6 The male portion of a mould that shapes the interior of a hollow moulded part is called _____

- a) Core
- b) Cavity
- c) Runner
- d) Gate

Q.7 The purpose of gate in moulding is to _____

- a) To deliver molten plastic into the mould
- b) Act as reservoir for molten material
- c) Vent out trapped gases
- d) Provide shape to the cavity

Q.8 EDM stands for :

- a) Electronic differential machine
- b) Electrical discharge machine
- c) Engineering down mould
- d) None of them

Q.9 The final portion of the die flow channel just before exiting the die, where the channel cross section is constant, is known as _____.

- a) Die swell
- b) Die land
- c) Die gap
- d) All of these

Q.10 function of sprue puller is to _____.

- a) Eject component
- b) To fill gap
- c) To remove sprue from its bushing
- d) None of these

SECTION-B

Note: Objective type questions. All questions are compulsory. $(10 \times 1 = 10)$

Q.11 Name two types of splits.

Q.12 The smaller the size of gate, better it is for design. (T/F)

Q.13 Name two different types of water connections used in plastic moulds.

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

Q.15 Give function of Bolster plate.

Q.16 Draw Ring gate.

Q.17 The _____ gate can be regarded as a special form of the annular gate and is mainly used when the centre of the product has a larger diameter than the main channel.

Q.18 Give any one advantage of hot runner mould.

Q.19 _____ is a channel that directs the molten plastic from the sprue to the cavity gate.

Q.20 _____ type of mould is used, when part of the runner system is on a different plane to the injection location.

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. $(12 \times 5 = 60)$

Q.21 Give functions of retainer plate.

Q.22 What do you understand by relief of parting surface?