

- Q.30 Out of square runner and fully round runner. Which runner you will prefer. Give justification of your choice.
- Q.31 What is gang mould What is its use.
- Q.32 What is difference between mould and Die. Write one product obtained form each.
- Q.33 How the cooling of Injection moulds meant for thermoset material is achieved.
- Q.34 Write a neat sketch define Internal Undercuts.
- Q.35 Draw a neat sketch of
 - a) Direct sprue Gate.
 - b) Hexagonal Gate.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. $(2 \times 10 = 20)$

- Q.36 What is parting Line. Write different type of parting lines. Draw a neat sketch of each.
- Q.37 Write the characteristics of following materials used in the fabrication of moulds Also write the mould part in which each material is used.
 - a) Ms
 - b) HCHC Steel
 - c) NC Steel
 - b) Silver Steel
- Q.38 Write down and define the various parts of following
 - a) Feed System
 - b) Mould alignment system.

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Semester : 5th
Plastic Technology/ Chem Engg (Spl Polymer Engg)
Subject:- Design of Dies and Moulds - I

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory $(10 \times 1 = 10)$

- Q.1 Moulding having undercuts are mostly molded using split moulds
 - a) True
 - b) False
 - c) Can't say
 - d) None of above
- Q.2 In most of cases core side plate is attached to fixed platen of Injection moulding machine
 - a) True
 - b) False
 - c) Can't say
 - d) None of above
- Q.3 Product made by PE material is cooled using heated oil
 - a) True
 - b) False
 - c) Can't say
 - d) None of above
- Q.4 Direct Sprue gate is used for multi impression mouldings
 - a) True
 - b) False
 - c) Maybe
 - d) None of above
- Q.5 Direct clamping of mould is better than Indirect clamping

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- a) True b) False
 c) Can't say d) None of above
Q.6 Cavity gives _____ shape of Plastics part
 a) Internal b) External
 c) Circular d) Square
Q.7 Four plate moulds are used in Plastic industry
 a) True b) False
 c) Can't say d) None of above
Q.8 Dies are used in
 a) Injection moulding machines
 b) Extruders
 c) Rotational moulding machines
 d) Compression moulding machines
Q.9 Taper is provided in impression to
 a) Ease Ejection
 b) For decoration
 c) For easy fillin of impression
 d) For surface finish
Q.10 Moulds are used with extruders
 a) True b) False
 c) Can't say d) None of above

SECTION-B

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

- Q.11 Define chiller.
 Q.12 What M and C stands for ,in the term MC Steel.
 Q.13 Undercuts make the ejection of plastics product easier. (T/F)

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- Q.14 Define ejector grid.
 Q.15 Three plate mould is made up of only three plates (T/F).
 Q.16 Define square runner.
 Q.17 Define Annealing.
 Q.18 Die is used in Injection Moulding Machine (T/F)
 Q.19 What N & C stands for in the term NC Steel.
 Q.20 Moulds can have more than one parting line. (T/F)

SECTION-C

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. $(12 \times 5 = 60)$
- Q.21 Define runner efficiency. Calculate the runner efficiency of square runner.
 Q.22 Write any one type of steel material used of fabricate guide pillars. Justify your answer.
 Q.23 What is weld line. Can it be avoided justify your answer.
 Q.24 Define wall thickness of Plastics Product. Should it be uniform or Non Uniform. Justify your answer.
 Q.25 Define O-rings Write material of manufacturing O-rings.
 Q.26 Define daylight of Injection Moulds. Give its significance.
 Q.27 Define runnerless molds. Why they are so called.
 Q.28 Draw neat and labelled sketch of any two types of register rings.
 Q.29 Define Spilt moulds. Give names of two split moulds.

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