

- Q.28 Explain Rack and Pinion type mould with its neat line diagram.
- Q.29 What are the various selection criteria for a melting furnace?
- Q.30 What are the limitations of residual stresses in forgings.
- Q.31 Explain any two forging equipment.
- Q.32 What are the different die lubricants & mould releasing agents? Give examples.
- Q.33 Give advantages and disadvantages of forging process.
- Q.34 Enlist the safety measures are to be considered in storage of forging die tools.
- Q.35 Describe the advantages of vacuum castings & its applications.

SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 Give design consideration of forging tools such as fuller, edger, bender, blocker and finisher.
- Q.37 Differentiate between investment and centrifugal casting in detail with neat diagram.
- Q.38 Explain the design procedure of closed die forging with the help neat sketch.

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6th Sem / T & D

Subject:- Forging and Casting Die-Design & Drawing

Time : 3Hrs.

M.M. : 100

SECTION-A

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

- Q.1 Ornamental objects, toys, statues etc. are cast by _____
a) Die casting b) Investment casting
c) Slush casting d) Centrifugal casting
- Q.2 In which of the forging process metal is kept in between a pair of dies and a gutter is provided in the lower die?
a) Open die b) Impression dies
c) Closed die d) Hold dies
- Q.3 In forging dies to facilitate removal forgings from die, the external draft angle must be _____
a) 1 degree - 3 degree b) 3 degree - 5 degree
c) 5 degree - 7 degree d) 7 degree - 10 degree
- Q.4 The height of sprue is selected such that velocity of molten metal in gating system must always ensure
a) Laminar flow
b) Turbulent flow
c) May be laminar or turbulent
d) None of these

- Q.5 The centrifugal casting method, is used for casting articles of _____
- symmetrical shape about horizontal axis
 - symmetrical shape about vertical axis
 - irregular shape
 - Sphere shape
- Q.6 The term applied to the first operation in an impression die forging is called
- Fullering
 - Blocking
 - Trimming
 - Coining
- Q.7 The optimum pouring time for a casting depends on several factors. One important factor among them is
- Porosity of sand mould
 - Location of riser
 - Fluidity of casting metal
 - Area of pouring basin
- Q.8 In a hot chamber die casting machine _____.
- melting pot is separate from the machine
 - melting pot may have any location melting
 - pot is an integral part of the machine
 - there is no melting pot in die casting machine
- Q.9 In which of the following forging operation instead of repeated hammering gradual force is applied?
- Drop forging
 - Smith forging
 - Coining
 - Press forging
- Q.10 Shaping of metal by squeezing them in between two or more dies in order to obtain desired shape is done by ?
- Forming
 - Forging
 - Welding
 - Grinding

SECTION-B

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

- Q.11 Define a book mould.
- Q.12 Give the importance of edge formation.
- Q.13 Give the function of overflow.
- Q.14 Give one limitations of toughness & ductility of a material?
- Q.15 Name any two forging tools
- Q.16 Enlist the gating formula.
- Q.17 Give the function of blocker.
- Q.18 Give the function of mould release agent.
- Q.19 Define cogging.
- Q.20 Name the machine used for very high production rate of large cylindrical parts.

SECTION-C

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

- Q.21 Explain main parts of pressure die casting machine with neat diagram
- Q.22 Explain the working of hot blast furnace in detail.
- Q.23 Describe metal stamping die.
- Q.24 Explain the term fuller, bender & finisher with neat sketches
- Q.25 Classify die casting materials.
- Q.26 Write the forging defects.
- Q.27 Draw a neat Labelled diagram of cupola furnace.