

- Q.27 Explain Ejector return mechanism with neat sketch.
- Q.28 Write the steps involved in forging a hexagonal nut from a cylindrical bar.
- Q.29 Write the advantages of centrifugal Die casting.
- Q.30 Explain with diagram Open die press forging process.
- Q.31 Describe the applications of pressure die casting process.
- Q.32 Write a short note on screw press.
- Q.33 Explain any one type of cooling method used in die casting.
- Q.34 Draw a neat sketch of push back type Ejector return mechanism and label its main parts.
- Q.35 Write in brief about design consideration of forging tools.

#### SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 List the various types of forging machines and explain any one in detail.
- Q.37 Explain main parts of pressure die casting machine with neat diagram.
- Q.38 Explain Cupola furnace with a neat sketch and label its various parts.

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#### 6th Sem / Branch : Tool & Die Sub.: Forging and casting Dies-Design & Drawing

Time : 3Hrs.

M.M. : 100

#### SECTION-A

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

- Q.1 In the forging operation, fullering is done to :
- Draw out the material
  - Bend the material
  - Upset the material
  - Extrude the material
- Q.2 Which of the following process would produce strongest components:
- Hot rolling
  - Cold rolling
  - Extrusion
  - Forging
- Q.3 Another name for closed die forging is:
- Drop forging
  - Impression forging
  - Cast forging
  - Hammering
- Q.4 Foundry crucible is made up of:
- Graphite
  - Lead
  - Cast iron
  - Mild steel

- Q.5 Which one of the following is an advantage of forging?
- Good surface finish
  - Close tolerance
  - Low tooling cost
  - Improved physical property
- Q.6 Which of the following material is not suitable to be cast by a hot chamber die casting process?
- Lead
  - Tin
  - Aluminium
  - Zinc
- Q.7 The hot chamber die casting method is used to cast \_\_\_\_.
- Brass
  - Magnesium
  - Aluminium
  - Alloys of lead, tin and zinc
- Q.8 Ornaments are cast by:
- Die casting
  - Continuous casting
  - Pressed casting
  - Centrifugal casting
- Q.9 The core in a centrifugal casting is made of \_\_\_\_.
- Carbon steel
  - Plastic
  - Properly treated sand
  - No core is used
- Q.10 Ferrous alloys are usually cast by \_\_\_\_.
- Hot chamber machine
  - Die casting machine
  - Cold chamber machine
  - None of the above

## SECTION-B

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

- Q.11 The forging method used to reduce the cross-sectional area is called \_\_\_\_.
- Q.12 What is the temperature of mild steel in forging?
- Q.13 Write any two tools used in forging die.
- Q.14 Define upsetting.
- Q.15 Write gating formula.
- Q.16 Write the name of any two casting processes.
- Q.17 Write any two uses of Extrusion dies.
- Q.18 What is pressure die casting.
- Q.19 Write the name of any two furnaces used in casting.
- Q.20 What do you mean by die lubricant.

## SECTION-C

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

- Q.21 Write short note on Maintenance of forging die tools.
- Q.22 Explain Centrifugal Casting Process.
- Q.23 What is gating system? Write the objectives of a good gating system.
- Q.24 Explain open die forging with neat sketch.
- Q.25 Explain in brief about the design considerations of forging tools.
- Q.26 Define permanent mould casting process. Also write its advantages.