

- Q.20 Explain the steps involved in designing a forging die.  
(CO10)
- Q.21 What materials are typically used for making dies?  
(CO1)
- Q.22 How does CAD technology aid in die design?(CO10)

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**3rd Year / Advance Diploma in Tool & Die Making**  
**Subject:- Tool Design - IV**  
**(Forging & Casting Dies)**

Time : 3Hrs.

M.M. : 60

### **SECTION-D**

**Note:** Long answer type questions. Attempt any two questions out of three questions.  $(2 \times 8 = 16)$

- Q.23 Explain the process of die casting, including the different types of machines used.  $(CO6)$
- Q.24 Describe the design parameters for forging dies and their significance.  $(CO9)$
- Q.25 Discuss the maintenance and safety measures necessary for forging and casting dies.  $(CO7)$

**(Note :** Course outcome/CO is for office use only)

**Note:** Multiple choice questions. All questions are compulsory  $(6 \times 1 = 6)$

- Q.1 What is the primary purpose of a forging die?  $(CO2)$
- a) To heat metal
  - b) To shape metal
  - c) To cool metal
  - d) To clean metal
- Q.2 Which type of forging is done at room temperature?  $(CO3)$
- a) Hot forging
  - b) Cold forging
  - c) Warm forging
  - d) All of the above
- Q.3 In die casting, what is the role of the ejection system?  $(CO7)$
- a) To hold the die
  - b) To inject molten metal
  - c) To remove the finished part
  - d) To cool the die

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Q.4 What material is commonly used for making dies?  
(CO1)

- a) Plastic
- b) Wood
- c) Steel
- d) Glass

Q.5 Which process uses a press to shape metal components?  
(CO2)

- a) Casting
- b) Forging
- c) Machining
- d) Welding

Q.6 What is a common defect in forging processes?(CO6)  
a) Overheating      b) Incomplete filling  
c) Misalignment      d) All of the above

## SECTION-B

**Note:** Objective/Completion type questions. All questions are compulsory. (6x1=6)

Q.7 The process of shaping metal by applying compressive forces is called \_\_\_\_\_. (CO2)

Q.8 The two main types of die casting are \_\_\_\_\_ and \_\_\_\_\_. (CO3)

Q.9 A \_\_\_\_\_ die is used for shaping metal without any flash. (CO5)

Q.10 The main component that provides the shape in casting is called the \_\_\_\_\_. (CO7)

Q.11 Safety equipment for die handling includes \_\_\_\_\_ and \_\_\_\_\_. (CO5)

Q.12 The \_\_\_\_\_ system helps to feed molten metal into the die during casting. (CO2)

## SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Describe the basic principles of forging. (CO2)

Q.14 What are the key features of a forging die? (CO9)

Q.15 Explain the difference between open and closed die forging. (CO1)

Q.16 What are the common defects in casting and their remedies? (CO8)

Q.17 How do you estimate the material required for a forging die? (CO6)

Q.18 Discuss the safety procedures to follow while handling dies. (CO7)

Q.19 What is the importance of cooling systems in die casting? (CO10)