

## MODEL QUESTION PAPER

Time: 3 Hours

Max.Marks: 100

**Instructions:**

1. **Group A** and **Group B** questions should be answered in the Main Answer book.
2. Answer any **TEN** questions in **Group A**. Each question carries three marks.
3. Answer **ALL** questions either (a) subdivision or (b) subdivision in **Group B**. Each question carries 14 marks.

**Group – A****Marks: 10 x 3 = 30**

1. What are the common materials used for pattern-making?
2. Draw a sketch of a typical mould and name its principal parts.
3. Classify different types of moulds.
4. Name the common materials used for forging.
5. Describe press forging.
6. What is the difference between the hammer and press forging?
7. What are the common forging defects?
8. List out the applications of welding
9. What are the functions of coatings on shielded electrodes?
10. Describe resistance welding.
11. What is meant by hot spinning.
12. Specify the merits of different kinds of rolling mills.
13. What is a press? Where it is used?
14. Name various parts of power press.
15. What is meant by Sintering?

**Group– B****Marks: 5 x 14 = 70**

16. a.i] How are patterns classified? Describe them with neat sketches and state the uses of each of them. (7)  
ii] Write short notes on core making process. (7)  
(OR)  
b) i] Sketch a cupola and label the essential parts. Describe the operation of a cupola Furnace. (7)  
ii] State the methods of cleaning castings. Explain any one method. (7)
- 17.a) i] What do you understand by gas welding? Describe in brief the equipment required for oxy- Acetylene welding? (7)  
ii] How are neutral, oxidizing and reducing flames obtained in a welding torch? (7)

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b) Describe and explain the following welding methods giving their advantages, limitations and specific applications:

- (i) MIG      (ii) TIG

18.a)i) State the difference between 'smithing and forging. List the advantage and disadvantage of each. (7)

ii) Explain roll forging and its principal uses. (7)

**(OR)**

b )i) Describe press forging. How does it differ from drop forging? (7)

ii) explain with neat sketches the following operations:

- 1)upsetting   2)punching   3)bending   4) drawing down (7)

19.a) Explain briefly with neat sketches different processes of extrusion and also discuss their relative merits and demerits.

**(OR)**

b) Describe the process of hot and cold spinning stating their advantages and Specific uses.

20.a) Name and explain various power press driving mechanisms.

**(OR)**

b) Outline the objectives of powder metallurgy process and also discuss the advantages and limitations of power metallurgy process.