

372

Register No.:

April 2024

Time - Three hours
(Maximum Marks: 100)

- [N.B. 1. Answer all questions under Part-A. Each question carries 3 marks.
2. Answer all the questions either (A) or (B) in Part-B. Each question carries 14 marks.]

PART - A

1. What is meant by shrinkage allowance?
2. Define the characteristics of core.
3. List out the equipments required for oxy-acetylene welding.
4. State the necessity of flux in Brazing process.
5. Differentiate between extrusion and drawing.
6. What are the purposes of heat treatment?
7. Write the properties of thermosetting plastics.
8. Define: (i) Blending (ii) Sintering
9. What are the advantages of semi-automatic lathe?
10. List out the accessories used in a lathe.

PART - B

11. (a) (i) Explain the working of sand slinger machine.(7)
(ii) Briefly explain the CO₂ moulding process and state two important merits and demerits.(7)
(Or)
(b) (i) Explain the working of optical pyrometer with neat sketch and its applications.(7)
(ii) Write short notes on sand and shot blasting process.(7)

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12. (a) Explain about Oxy-acetylene cutting with neat sketch.
(Or)
(b) Explain the various defects found in welding. Write their causes and remedies.
13. (a) (i) Differentiate press forging and drop forging.(7)
(ii) Explain the hydraulic press with neat sketch.(7)
(Or)
(b) (i) Explain the various factors that influence the hardening of steel.(6)
(ii) Explain any one tempering processes.(8)
14. (a) (i) With a neat sketch, explain the functioning of twin screw extruder. (7)
(ii) Explain the rotational moulding with a neat sketch.(7)
(Or)
(b) (i) State the various methods of manufacturing metal powders and explain any one method.(9)
(ii) Explain mechanical properties of parts made by powder metallurgy process.(5)
15. (a) Explain the construction of centre lathe with simple sketch.
(Or)
(b) (i) Describe the working of a progressive action multi spindle automatic lathes with a neat sketch.(10)
(ii) Compare single spindle and multi spindle automatic lathes.(4)
