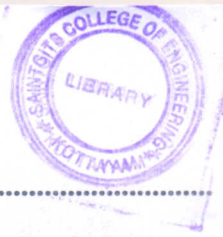


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Reg. No.....

Name.....



B.TECH. DEGREE EXAMINATION, MAY 2015

Fourth Semester

Branch : Automobile Engineering/Mechanical Engineering

AU 010 404/ME 010 404—MANUFACTURING PROCESS (AU, ME)

(New Scheme—2010 Admission onwards)

[Regular/Improvement/Supplementary]

Time : Three Hours

Maximum : 100 Marks

Part A

Answer all questions.

Each question carries 3 marks.

1. What are the characteristics of a core ?
2. What are the different types of oxyacetylene flames and for what applications are these used ?
3. What is the important of recrystallization temperature in metal forming ?
4. What is a precision forging ?
5. What are various sheet metal forming operations ?

(5 × 3 = 15 marks)

Part B

Answer all questions.

Each question carries 5 marks.

6. What are the functions of a riser ? What parameters decide the design of a riser ?
7. What is the function of using shielding gases ? Name the shielding gases used in TIG and MIG welding.
8. What is hot rolling ? Difference between flat rolling and shape rolling.
9. What are the advantages and disadvantages of hot forging ?
10. Explain the difference between embossing and coining.

(5 × 5 = 25 marks)

Part C

Answer all questions.

Each question carries 12 marks.

11. What is permanent mold casting ? Why it is named ? Discuss important features of the permanent mold casting process.

Or

Turn over

12. What do you understand by casting defect ? Explain different types of casting defects and its causes.
13. Explain with neat sketch submerged arc welding. What are the advantages of submerged arc welding ?

Or

14. Why do residual stresses get developed in weldments ? Discuss various methods adopted for minimizing distortion.
15. Explain the production of seamless pipe and tubes.

Or

16. What are the advantages of thread rolling ? Explain the features of a thread rolling process with suitable sketches.
17. Why is heat treatment of forging essentially needed sometimes ? Explain important heat treatment processes used for forgings.

Or

18. What is a isothermal forging ? Explain features of an impression die and closed die forging processes.
19. Explain with neat sketch deep drawing operation. Discuss deep drawing operations used in various products.

Or

20. Explain with neat figures different types of bending operations.

(5 × 12 = 60 marks)

