G 517 (Pages : 2) Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, MAY 2014

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 main considerations for a good design of a casting ?
2. How does penetration vary for DCSP and DCRP welding ?
3. What is the role of lubrication during rolling ?
4. Why a forging is considered stronger than casting ?
5. What are the different types of dies used in press work ?

(5 × 3 = 15 marks)

Part B

Answer **all** *questions.*
Each question carries 5 *marks.*

6. What are shell molds ? Give their applications.
7. What is a welding position ? Discuss various welding positions with the help of neat sketches.
8. What is thread rolling ? How is it done ?
9. Explain different types of forging defects.
10. What is sheet metal spinning ? How is it done ?

(5 × 5 = 25 marks)

Part C

Answer **all** *questions.*
Each question carries 12 *marks.*

11. What is centrifugal casting ? What are its specific applications? Mention the important characteristics of the process.

Or

12. What are the different types of gates ? Discuss them with sketches. Also point out their merits and demerits.

Turn over

13. Compare MIG and TIG welding in respect of their principle of working and field of application.

Or

14. Explain with neat sketches plasma arc welding. Give their industrial applications.

15. Name different types of rolling mills. Explain tandem rolling and planetary rolling.

Or

16. What are the main features of cold working ? Explain with neat sketches cold drawing of tubes and wires.

17. Explain with neat open die forging. Discuss the advantages and limitations.

Or

18. What is a isothermal forging ? Explain features of an impression die and closed die forging processes.

19. Explain the theory of shearing of metal. Discuss various types of shearing operations.

Or

20. What are the classifications of dies ? Explain operation of the compound dies and progressive dies.

(5 × 12 = 60 marks)