

**F 3168**

(Pages : 2)

Reg. No.....

Name.....



**B.TECH. DEGREE EXAMINATION, NOVEMBER 2014**

**Fifth Semester**

Branch : Mechanical Engineering/Automobile Engineering

**MANUFACTURING PROCESSES (MU)**

(Old Scheme—Prior to 2010 Admissions)

[Supplementary/Mercy Chance]

Time : Three Hours

Maximum : 100 Marks

**Part A**

*Answer all questions.*

*Each question carries 4 marks.*

1. Briefly explain an advanced method of cleaning of Castings.
2. List the applications of casting process.
3. What is heat affected zone in welding ?
4. Which weld parameter is most important and why ?
5. Write a note on precision in rolling operations.
6. How will you determine the strip velocity in rolling ?
7. Write a note on spinning and coining.
8. Differentiate between blanking and punching.
9. Discuss the principle of upsetting.
10. How does plastic deformation occur in forging ?

(10 × 4 = 40 marks)

**Part B**

*Answer all questions.*

*Each full question carries 12 marks.*

11. Explain, in detail all the aspects of quality control and inspection of castings.

*Or*

12. Discuss, with neat labelled diagrams :

- (i) Centrifugal casting.
- (ii) Investment casting; and
- (iii) Squeeze casting.

Turn over

13. What is the basic principle of welding ? Explain the classification of welding.

*Or*

14. Differentiate between brazing, soldering and explosive welding processes. Draw neat figures.

15. Explain various aspects of friction and lubrication in all metal forming processes.

*Or*

16. Explain mechanical, electrohydraulic, electromagnetic and explosive forming processes.

17. With neat sketches, explain press working operations and typical applications.

*Or*

18. Discuss the mechanisms of transfer, injection and compression moulding processes.

19. Explain all the steps in tube piercing operations. Detail all the equipments used.

*Or*

20. Discuss the logic for selection of machinery for hot forging processes. Explain the effect of thermal fluctuations on hot forged components.

(5 × 12 = 60 marks)

