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**Question Paper Code : 77209**

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2015.

Third Semester

Mechanical Engineering

ME 6302 — MANUFACTURING TECHNOLOGY — I

(Common to Industrial Engineering, Industrial Engineering and Management and  
Mechanical and Automation Engineering)

(Regulation 2013)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. List the different types of patterns.
2. Write the application of core prints.
3. Name various causes for the defect porosity in the welding.
4. Write the difference between brazing and soldering.
5. What are the various forming processes?
6. Name various defects in parts produced by drawing.
7. How are sheet metal operations classified and what are they?
8. What is flanging?
9. Define Polyaddition.
10. Write short notes on the application of plastics.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain the properties required for moulding sand. (8)  
(ii) Explain the preparation of moulding sand process. (8)

Or

- (b) (i) Explain any one type of centrifugal casting with neat diagram. (8)  
(ii) Name any five casting defects and explain the remedies for those defects. (8)
12. (a) (i) Explain various welding positions with neat sketch. (8)  
(ii) Explain the submerged arc welding process with neat diagram. (8)

Or

- (b) (i) Explain the arc welding process with neat sketch. (8)  
(ii) Describe the ultrasonic welding process with neat diagram. (8)
13. (a) (i) Explain hot working and cold working with their advantages and limitations. (8)  
(ii) Explain various forging operations. (8)

Or

- (b) (i) Describe the ring rolling and thread rolling process. (8)  
(ii) Explain the forward and backward extrusion process. (8)
14. (a) (i) Explain the various properties of sheet metal. (8)  
(ii) Describe the nibbling and notching operations. (8)

Or

- (b) (i) Explain the different types of bending process. (8)  
(ii) In detail explain the Coining and Embossing Process. (8)
15. (a) (i) Write the difference between thermoplastics and thermosetting plastics. (8)  
(ii) Explain the injection blow moulding process. (8)

Or

- (b) (i) Explain the calandring process. (8)  
(ii) Describe any two types of thermoforming process. (8)