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B.E DEGREE END SEMESTER EXAMINATIONS

April- May 2013

B.E./B.Tech (Full Time)

Common to Mechanical Engineering & Industrial Engineering

III SEMESTER (English and Tamil medium)

ME 9201 – MANUFACTURING TECHNOLOGY-I (R 2008)

Time: 3 Hrs

Max Marks: 100

Answer ALL Questions

Part – A (10 x 2 = 20 Marks)

1. State the need of pattern allowances?
2. List the materials commonly used to make permanent moulds.
3. What is the purpose of coating on arc welding electrode?
4. Which method of resistance welding is used to join dissimilar metals?
5. Write the advantages of press forging over drop forging.
6. Define the extrusion ratio.
7. How to minimize the spring back phenomenon in bending process?
8. Define peen forming.
9. What is the term polymerization?
10. State the properties of thermosetting plastics?

Part –B (5 x 16 = 80 Marks)

11. (i) What are the essential properties required for moulding sand? (4)
(ii) Describe the lost wax process with neat sketches. (6)
(iii) Discuss the various casting defects with neat sketches. (6)
12. (a) Explain the following welding methods with neat sketches.
(i) Gas metal arc welding (8+8)
(ii) Percussion welding

(OR)

- (b) Discuss the following welding techniques with neat sketches. (8+8)
- (i) Thermit welding
 - (ii) Electron beam welding

- 13 (a) Name the various Forging machines. Explain the Hydraulically operated Forging machine with neat sketch and write its applications, advantages and disadvantages.

(OR)

- (b) Write short notes on the following
- (i) Tube drawing
 - (ii) Wire drawing (4x4)
 - (iii) Impact extrusion
 - (iv) Indirect extrusion

14. (a) (i) State the term formability. (4)

(ii) Describe the following sheet metal operations

- (i) Shearing (ii) Bending (iii) Drawing (4x3)

(OR)

- (b) (i) Discuss the Magnetic pulse forming with neat sketch and write its application, advantages and disadvantages.

- 15 (a) Explain the working principle of Injection moulding process with neat sketches and write its applications and advantages.

(OR)

- (b) Explain the Rotation moulding and Blow moulding process with neat sketches.