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Question Paper Code: 1143261

B.E. / B.Tech. DEGREE EXAMINATIONS, NOV/ DEC 2024

Third Semester

Mechanical Engineering

ME8351 – MANUFACTURING TECHNOLOGY - I

(Regulation 2017)

Time: Three Hours

Maximum: 100 Marks

Answer ALL questions

PART – A

(10 x 2 = 20 Marks)

1. Define Pattern.
2. Which process is called “Lost wax process”? Why?
3. What is the function of shielding gas in welding?
4. List any four weld defects.
5. What is meant by recrystallization temperature?
6. What is extrusion?
7. Distinguish between blanking and punching.
8. What is meant by stretch forming?
9. What is Injection Moulding?
10. Define polymerization.

PART – B

(5 x 13 = 65 Marks)

11. (a) What are the allowances given while making pattern? Explain. (13)

(OR)

- (b) Describe the constructional feature of cupola furnace. (13)

12. (a) Compare MIG and TIG welding in respect of their principle of working and field of application. (13)

(OR)

- (b) Explain the principle of operation, advantages and limitations of electron beam welding. (13)

13. (a) Explain the mechanisms of rolling process with clear sketch. Write about some defects associated with rolling. (13)

(OR)

- (b) Elaborate how threads are rolled. (13)

14. (a) Explain the Explosive forming process with suitable applications. (13)

(OR)

- (b) Enumerate rubber pad forming with suitable sketch with suitable applications. (13)

15. (a) Explain how plastic sheets are formed into 3D shapes by thermoforming method. (13)

(OR)

- (b) Outline and explain the sequence of operations in the injection molding of a part with a reciprocating screw with neat sketch. (13)

PART – C

(1 x 15 = 15 Marks)

16. (a) Describe the working principle, equipment, and applications of the Submerged Arc Welding (SAW) process. Highlight its advantages over other welding techniques. (15)

(OR)

- (b) Explain the working principle and applications of Hydro forming. Compare its advantages and limitations with conventional forming methods. (15)

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