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Question Paper Code: 33072

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2017

Third Semester

Mechanical Engineering

01UME302 - MANUFACTURING TECHNOLOGY - I

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions.

PART A - (10 x 2 = 20 Marks)

1. State the essential properties of moulding sand.
2. What is the principle employed in precision investment casting?
3. Differentiate soldering and brazing.
4. Draw three types of welding flame and indicate the zones.
5. What is stretch forming?
6. Write the limitations of hot working process.
7. Differentiate between piercing and blanking.
8. What is the difference between stretch forming and bending?
9. Write the difference between thermoplastic and thermo set.
10. Write any two limitations of Electro-magnetic forming process.

PART - B (5 x 16 = 80 Marks)

11. (a) Discuss the properties of moulding sand in detail.

(16)

Or

- (b) Define centrifugal casting. Write down the working principle in detail with neat sketch. (16)
12. (a) Sketch the three types of Oxy-acetylene flames and state their characteristics and applications. (16)

Or

- (b) Briefly explain about laser and friction welding process with neat sketches. (16)
13. (a) Describe the principle of rolling. Explain the various kinds of rolling mills along with their applications. (16)

Or

- (b) With neat sketch, explain the working of a pneumatic hammer for forging. (16)
14. (a) Describe the various methods of rubber forming. Where are these processes used. (16)

Or

- (b) Briefly explain the following special forming process with its advantages
- (i) Explosive forming (8)
 - (ii) Super plastic forming. (8)
15. (a) What are the processes used for processing of thermoplastic? Explain any one process with suitable sketches. (16)

Or

- (b) Elaborate blow moulding process with neat sketch. (16)
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