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Question Paper Code: 33702

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 2019

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. List out pattern material used in casting process.
2. Mention the purpose of runner and riser in casting process.
3. Distinguish MIG and TIG welding process.
4. List the type of defects observed in welded parts.
5. What is stretch forming?
6. List down the various steps involved in drop forging.
7. What is the working principle of magnetic pulse forming?
8. Differentiate between piercing and blanking.
9. How do thermoplastics differ from thermo-setting plastics?
10. Name the factors that influence the accuracy to which plastic parts can be moulded.

PART - B (5 x 16 = 80 Marks)

11. (a) Describe briefly the CO₂ method of making cores and list some of its advantages. (16)

Or

- (b) Define centrifugal casting. Write down the working principle in detail with neat sketch. (16)
12. (a) (i) Why is it difficult to start AC arc? How is it simplified in practice? (4)
(ii) What are the basic differences between arc welding and submerged arc welding? (6)
(iii) Write short notes on “Thermal Welding” (6)

Or

- (b) With neat sketch explain the following welding process: (i) Plasma arc welding and (ii) TIG welding. (16)
13. (a) Describe the principle of rolling. Explain the various kinds of rolling mills along with their applications. (16)

Or

- (b) Describe deep drawing process with neat sketch and list its advantages, disadvantages and applications. (16)
14. (a) Briefly explain the following processes with the help of neat diagrams
(i) Electro hydraulic forming (8)
(ii) Magnetic pulse forming (8)

Or

- (b) Briefly explain the following special forming process with its advantages
(i) Explosive forming (8)
(ii) Super plastic forming. (8)
15. (a) Narrate the working principle of injection moulding process in detail with necessary sketch. (16)

Or

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