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**Question Paper Code: 31072**

B.E. / B.Tech. DEGREE EXAMINATION, OCTOBER 2014.

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. Write the principle involved in wire drawing.
7. List out some special forming processes.
8. Name any two explosive materials used in explosive forming.
9. Write the difference between thermoplastic and thermo set.
10. Give some application of injection moulding process.

PART - B (5 x 16 = 80 Marks)

11. (a) With neat sketch explain the steps for making a green sand mould for casting a taper cylindrical block.

(16)

Or

(b) Define centrifugal casting. Write down the working principle in detail with neat sketch. (16)

12. (a) Explain following welding processes with neat diagrams

(i) Shielded metal arc welding process (8)

(ii) Gas welding process. (8)

Or

(b) (i) Briefly explain about laser and friction welding process with neat sketches. (8)

(ii) Differentiate welding, brazing and soldering process. (8)

13. (a) Explain forward and backward extrusion process with neat sketch. (16)

Or

(b) Describe deep drawing process with neat sketch and list its advantages, disadvantages and applications. (16)

14. (a) With a neat sketch explain the following special forming processes

(i) Rubber pad forming (8)

(ii) Hydro 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)