**Code No. 3050**

**FACULTY OF ENGINEERING**

**B.E. 3/4 (Mech.) I-Semester (Supplementary) Examination, June/July 2011**

**MANUFACTURING PROCESSES**

Time : Three Hours] [Maximum Marks : 75

*Note :—Answer **ALL** questions from Part—A. Answer **FIVE** questions from Part—B.*

**PART—A (Marks : 10×2½=25)**

1. What is the purpose of core ? State various types of cores.
2. Assuming suitable h/D ratio find out the dimensions of a cylindrical riser designed for a casting section with modulus 2 cm.
3. State the advantages of centrifugal casting over sand casting.
4. State the applications of blow moulding.
5. State the differences between brazing and soldering.
6. "Eventhough Oxidation in welding is treated to be detrimental to welding, oxidising flame is used to weld certain materials." Which materials and why ?
7. What is 'under cut' in welding ? State the causes and remedies.
8. State the differences between blanking and piercing.
9. What is meant by Roll separating force ? What is the effect of roll diameter on it ?
10. State various types of hammers used for forging.

**PART—B (Marks : 5 × 10 = 50)**

11. (a) State Sivert's law. 2
    (b) Explain the construction and working of cupola with a neat sketch. 8
12. (a) "Centrifugal casting gives 100% yield." Justify the statement. 2
    (b) Explain about injection moulding in detail with a neat sketch along with its applications. 8
13. (a) What are required Properties of alloys used for soldering and brazing ? 2
    (b) Explain about Explosive welding in detail with neat sketches. What are its relative merits and demerits compared to other solid state welding processes ? 8

14. (a) State the principle of Resistance welding. 2

(b) Explain about deep drawing process with a neat sketch. State the causes and remedies of Wrinkling and Earing. 8

15. (a) Why can not wire drawing be made as hot working process ? 2

(b) Derive the expression for Von-Mises criteria of yielding. With this criteria prove that hydrostatic stress does not produce any yielding. 8

16. Explain the following in brief :—

(a) Modulus and its significance. 3

(b) Thermoforming. 3

(c) Types of flames in gas welding. 4

17. Explain about the following in brief :—

(a) Ring weldability test 4

(b) Impact Extrusion. 3

(c) Flash and Gutter in forging. 3