

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V • EXAMINATION – WINTER • 2014****Subject Code: 151901****Date: 26-11-2014****Subject Name: Manufacturing Processes - II****Time: 10.30 am - 01.00 pm****Total Marks: 70****Instructions:**

- 1. Attempt all questions.**
- 2. Make suitable assumptions wherever necessary.**
- 3. Figures to the right indicate full marks.**

Q.1 (a) Write the steps for making a casting by the removable pattern sand mould casting process. **07**

(b) With the help of diagram discuss the following types of pattern **07**
(i) Loose piece pattern (ii) sweep pattern (iii) Match plate pattern.

Q.2 (a) Explain following **07**

- (i) Function of additives in moulding sand
- (ii) Various types of cores used in casting.

(b) With the help of sketches, explain centrifugal casting. **07**

OR

(b) Write short note on "Shell Moulding Method". **07**

Q.3 (a) Discuss the merits and demerits of A.C. and D.C. power sources. **07**
Explain straight and reverse polarity.

(b) Explain differences between TIG and MIG welding processes. **07**

OR

Q.3 (a) Explain seam welding process with the help of sketch. How does it differ from spot welding? **07**

(b) Explain various flames produced in an Oxy-acetylene gas welding. **07**

Q.4 (a) Explain electron beam welding. State its applications, **07**

(b) Discuss strain rate effect and metallurgy structure in metal working. **07**

OR

Q.4 (a) Define forging. Give its merits, demerits and applications. **07**

(b) Compare direct and indirect extrusion. **07**

Q.5 (a) Explain blanking, piercing, coining, embossing, drawing and squeezing. **07**

(b) What are the characteristics of thermoplastics? How does it differ from thermosetting plastics? **07**

OR

Q.5 (a) Explain transfer moulding process with sketches. **07**

(b) Explain compression process of moulding plastics. **07**
