

**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  
(i) Loose piece pattern (ii) sweep pattern (iii) Match plate pattern. **07**
- 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. Explain straight and reverse polarity. **07**
- (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**

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