

GUJARAT TECHNOLOGICAL UNIVERSITY**BE – SEMESTER V • EXAMINATION – WINTER - 2012****Subject code: 151901****Date: 11-01-2013****Subject Name: Manufacturing Processes - II****Time: 02:30 pm to 05:00 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) List the various manufacturing processes. Discuss various factors involved for selection of manufacturing process for producing a given component. **07**
- (b) With the help of neat sketch, explain the process of preparing a sand mould by the hand moulding method. **07**
- Q.2** (a) Explain the following with neat sketch : **07**
- (i) Core print
- (ii) Sweep pattern
- (iii) Match plate pattern
- (iv) Draft allowance.
- (b) State the ingredients of moulding sand and explain the method used for determining the permeability of any moulding sand. **07**
- OR**
- (b) Discuss : (i) Precision investment casting. **07**
- (ii) Centrifugal casting.
- Q.3** (a) (i) Write the functions of flux used in some welding processes. **07**
- (ii) Explain the advantages of oxy-acetylene gas welding technique.
- (b) Explain the TIG and MIG arc welding. Give the application of each. **07**
- OR**
- Q.3** (a) Explain the principle of resistant welding and explain the seam welding process with neat sketch. Give its applications. **07**
- (b) Write short note on Electron Beam welding. **07**
- Q.4** (a) Explain with sketches the difference between direct and indirect extrusion. **07**
- (b) (i) Explain how forging improves the mechanical properties of components. **07**
- (ii) Distinguish clearly between drop-forging and press-forging processes with references to the process and products obtained.
- OR**
- Q.4** (a) (i) What are the advantages of hot working over cold working of metals? **07**
- (ii) Explain the term ingot, slab, bloom and billet.
- (b) Explain the wire drawing and tube drawing with neat sketches. **07**
- Q.5** (a) Explain thermoplastic and thermosetting plastic materials. **07**
- (b) Explain the extrusion blow-moulding process. Give its applications. **07**
- OR**
- Q.5** (a) List the various types of mould used in injection moulding. Explain any one with sketch giving its applications. **07**
- (b) List the various super finishing processes and explain any two of them. **07**
