

GUJARAT TECHNOLOGICAL UNIVERSITY**B. E. Sem. - V - Examination – June- 2011****Subject code: 151901****Subject Name: Manufacturing Processes - II****Date: 20/06/2011****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) Define the term pattern. List out the materials commonly used for pattern. **07**
State advantages of wood as pattern material.

- (b)** Discuss : **07**
(i) Difference between hot working and cold working of metal.
(ii) Classification of plastic and its general properties.

Q.2 (a) Classify metal joining processes. Explain the principle of gas welding process with its advantages and limitations. **07**

- (b)** Classify electrode used in arc welding and explain IS code used to specify it. **07**

OR

- (b)** State the types of furnaces used in foundries. Discuss in brief the working of electric furnace. **07**

Q.3 (a) Explain the principle of arc welding with neat sketch. State the parameters affecting the arc. **07**

- (b)** Discuss with neat sketch TIG welding process. State its advantages, limitations and applications. **07**

OR

Q.3 (a) Describe explosive welding process with its advantages and limitations. **07**

- (b)** State the principle of centrifugal casting and explain its working with neat sketch. Give its advantages. **07**

Q.4 (a) List the essential properties of moulding sand. State the effect of each properties on casting. **07**

- (b)** Define pattern allowances. List various pattern allowances. State purpose of each allowances **07**

OR

Q.4 (a) What is gating system? What are its functions? State types of gate with its advantages. **07**

- (b)** Explain investment casting process. State its advantages and applications. **07**

Q.5 (a) List the factors influencing rolling process. Explain the effect of roller diameter and metal friction on rolling process. **07**

- (b)** Explain tube drawing and wire drawing process. **07**

OR

Q.5 (a) State the functions of superfinishing processes. Explain with sketch working of grinding and lapping process. **07**

- (b)** Explain **07**
(i) Difference between thermoplastic and thermosetting.
(ii) Process of polymerization.