

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI • EXAMINATION – WINTER 2013****Subject Code: 162504****Date: 04-12-2013****Subject Name: Allied Manufacturing Processes****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)** What is automation? Compare and contrast Capstan lathe and Turret lathe. **07**
(b) State and explain transfer machines in brief. **07**

- Q.2 (a)** Define the term 'Screw thread'. Explain various forms of threads in brief. **07**
(b) What purposes are served by the screw threads? Enumerate various methods of making threads in brief. **07**

OR

- (b)** Explain: Thread grinding; Thread rolling and Screw thread inspection in brief. **07**

- Q.3 (a)** What is gear? State the types of gears and their applications in brief. **07**
List the advantages and disadvantages of toothed gearing.
(b) Define: Gear grinding; Gear shaving, and Gear testing in brief. **07**

OR

- Q.3 (a)** What purposes are served by the gears? Enumerate various methods of making gears in brief. **07**
(b) State how external and internal threads are manufactured? State limitations in each case. **07**

- Q.4 (a)** State the reasons for various protective surface treatments done for metals. Give example in each case. **07**
(b) What is electroplating? Explain with the help of neat sketch, the working principle of electroplating. **07**

OR

- Q.4 (a)** State and explain industrial applications of plastics in brief. **07**
(b) Explain with the help of neat sketch, the working principle of injection molding. State its limitations. **07**

- Q.5 (a)** Distinguish between conventional and unconventional manufacturing processes used in industries. Give examples in each case. **07**
(b) Explain with the help of a neat sketch, the working principle of ECM. State its limitations **07**

OR

- Q.5 (a)** List the unconventional processes. State the basic factors upon which the unconventional processes are classified. Explain. **07**
(b) Explain with the help of a neat sketch, the working principle of EDM. State its limitations **07**
