

GUJARAT TECHNOLOGICAL UNIVERSITY**BE SEM-VI Regular Examination May 2011****Subject code: 162504****Subject Name: Allied Manufacturing Processes****Date: 23/05/2011****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.
4. Draw neat sketches wherever necessary.

- Q.1** (a) Differentiate Capstan and Turret Lathes. Explain bar feed mechanism with neat sketch. **07**
- (b) Differentiate Thermoplastic and Thermosetting plastics. Explain Transfer Molding with neat sketch. **07**

- Q.2** (a) State and draw various standard thread forms. Explain Thread chasing on a Turret Lathe with neat sketch. **07**
- (b) Define and Classify Transfer Machine. Explain any two of them with neat sketch. **07**

OR

- (b) Draw and show elements of screw thread. Explain Thread Rolling with possible benefits. **07**

- Q.3** (a) Classify Gear Manufacturing Methods. Explain Gear Hobbing Process. **07**
- (b) Explain properties of Plastic. Which additives are added in plastic and why? **07**

OR

- Q.3** (a) Classify Gears along with their specific applications. Explain Gear Shaving process with a neat sketch. **07**
- (b) Define Polymerization. Explain Injection Molding with a neat sketch. **07**

- Q.4** (a) Why metal coating is required? Explain Zink Plating with relative merits and demerits. **07**
- (b) What is the necessity of Unconventional Machining Process in modern industries? Classify compare and explain various processes according to basic mechanism involved. **07**

OR

- Q.4** (a) Explain any two – (i) Ceramic Coating (ii) Powder Coating (iii) Blackening **07**
- (b) State specific features of Abrasive Jet Machining. Explain the process with relative merits, demerits and applications. **07**

- Q.5** (a) On which principle the Electron Beam Machining process works? Explain the process with relative merits, demerits and applications. **07**
- (b) In which unconventional process Ruby Rod is used? Explain the process in detail with neat sketch. **07**

OR

- Q.5** (a) For which applications, the Ultrasonic Machining is the best over others? Explain the process in detail with neat sketch. **07**
- (b) Which process is using the principle opposite to Electro Plating? Explain the process in detail with neat sketch. **07**
