

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- VIth SEMESTER–EXAMINATION – MAY- 2012****Subject code: 162504****Date: 19/05/2012****Subject Name: Allied Manufacturing Processes****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) In which situations, turret lathe is preferred over capstan lathe? Give the specifications of turret lathe and explain its working. **07**
- (b) State the industries where the transfer machines are more useful. Classify and explain the working of any one type transfer machine. **07**
- Q.2** (a) Explain various types of thread standards along with neat sketches and nomenclatures. **07**
- (b) What is pitch of a thread? How threads can be manufactured by rolling process? **07**
- OR
- (b) Which instruments are useful for thread inspection? How the screw threads can be inspected? **07**
- Q.3** (a) Classify the gears. How the gears can be manufactured by powder metallurgy? **07**
- (b) Explain how gears can be manufactured by form tooth process. **07**
- OR
- Q.3** (a) Classify gear finishing processes and explain gear shaving. **07**
- (b) Why metal coating is required? State various merits and demerits of metal coating. **07**
- Q.4** (a) Explain in detail how ceramics and glass coating is carried out. **07**
- (b) Which types of components can be manufactured by injection molding? Explain injection molding process in detail. **07**
- OR
- Q.4** (a) Differentiate compression molding and transfer molding with respect to their relative merits, demerits, applications, tooling and working. **07**
- (b) In which way zinc coating and chrome coating differs? Explain zinc coating process in detail. **07**
- Q.5** (a) Explain in which areas, the unconventional manufacturing methods are superior than conventional manufacturing methods. Also state the demerits. **07**
- (b) Explain abrasive jet machining process with its parameters, features, merits, demerits and applications along with neat sketch. **07**
- OR
- Q.5** (a) Explain electro chemical machining process with its parameters, features, merits, demerits and applications along with neat sketch. **07**
- (b) Compare plasma arc machining and laser beam machining with respect to its tools, process, merits, demerits and applications. **07**
