

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA ENGINEERING – SEMESTER –III • EXAMINATION – SUMMER 2014

Subject Code: 3335502**Date: 13/06/2014****Subject Name: MECHANICAL TECHNOLOGY****Time: 10:30 am – 1:00 pm****Total Marks: 70****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Each question carry equal marks (14 marks)

- Q.1** (a) Explain mechanics of metal cutting with neat sketch. **07**
(b) Draw neat sketch of lathe & write specification of lathe. **07**
- Q.2** (a) List different lathe operation & Explain any five with neat sketch. **07**
(b) Calculate taper of job for major dia $D= 30$ mm, Minor dia $d= 20$ mm & length of taper =20 mm **07**
- OR
- (b) Draw block diagram of radial drilling machine and label its parts. **07**
- Q.3** (a) List different types of drill tool. Explain any two with neat sketch. **07**
(b) Explain working principle of shaper with neat sketch. **07**
- OR
- Q.3** (a) Draw twist drill geometry and label its parts. write specification of twist drill geometry for steel & stainless steel material. **07**
(b) Compare shaper and planner machine. **07**
- Q.4** (a) List different type of milling cutter and explain any three with neat sketch **07**
(b) Classify the grinding wheel according to size and shape with neat sketch. **07**
- OR
- Q.4** (a) List different types of dividing heads and explain any one with neat sketch. **07**
(b) Explain selection criteria of grinding wheel. **07**
- Q.5** (a) Explain advantages and application of metal casting **07**
(b) Explain different pattern making materials. **07**
- OR
- Q.5** (a) Classify core. Explain any five types of cores with neat sketch. **07**
(b) Compare Hot Working & Cold Working Process. **07**
