

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

Diploma Engineering - SEMESTER-III • EXAMINATION – WINTER 2013

Subject Code: 335501

Date: 28-11-2013

Subject Name: Mechanical Technology

Time: 02:30 pm - 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.
4. English version is considered to be Authentic.

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|-------------|--|-----------|
| Q.1 | (a) Compare orthogonal and oblique cutting with neat sketch. | 07 |
| | (b) Draw neat sketch of centre lathe and label its parts. | 07 |
| Q.2 | (a) List different lathe accessories and explain any three with neat sketch. | 07 |
| | (b) Calculate taper of job for major dia $D = 25\text{mm}$, Minor dia $d = 12\text{mm}$ & length of taper $= 25\text{mm}$ | 07 |
| | OR | |
| | (b) Explain single point cutting tool geometry with neat sketch. | 07 |
| Q.3 | (a) Explain radial drilling machine with neat sketch | 07 |
| | (b) Explain working principle of shaper with neat sketch. | 07 |
| | OR | |
| Q.3 | (a) Explain Hydraulic shaper drive mechanism with neat sketch. | 07 |
| | (b) List different types of milling machine and explain any one with neat sketch | 07 |
| Q.4 | (a) List different milling operation and explain any five with neat sketch | 07 |
| | (b) Explain different types of abrasives used in grinding wheel. | 07 |
| | OR | |
| Q. 4 | (a) Explain marking system of grinding wheel in chart form | 07 |
| | (b) Explain different steps involved in making a casting | 07 |
| Q.5 | (a) Classify the pattern and explain in brief any five with neat sketch. | 07 |
| | (b) Explain induction furnace with neat sketch | 07 |
| | OR | |
| Q.5 | (a) Compare Hot Working & Cold Working Process. | 07 |
| | (b) Explain the process of spinning process with neat sketch. | 07 |
