

**GUJARAT TECHNOLOGICAL UNIVERSITY****DIPLOMA ENGINEERING – SEMESTER – III • EXAMINATION – SUMMER- 2017****Subject Code: 3335502****Date: 29 -04 -2017****Subject Name: Mechanical Technology****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.
4. Use of programmable & Communication aids are strictly prohibited.
5. Use of only simple calculator is permitted in Mathematics.
6. English version is authentic.

- Q.1** (a) Explain need of Attitude, knowledge & Skill required for shop floor Supervisor in machine tools Industries. **07**
- (b) Compare 3 jaw and 4 jaw Chuck with its neat sketch. **07**
- Q.2** (a) Explain different Lathe operation any five with neat sketch. **07**
- (b) Calculate metal removal rate with following given data: **07**
- Dia. of a job = 40 mm  
RPM = 80  
Feed Rate = 0.015 mm/Rev  
Depth of cut = 0.5 mm  
Length of Job = 160 mm
- OR
- (b) Explain Thread cutting operation on lathe with neat sketch **07**
- Q.3** (a) Explain function & properties of good cutting fluid. **07**
- (b) List different types of drill tool. Explain any two with neat sketch. **07**
- OR
- Q.3** (a) List different operations performed on drilling machine and explain any five with neat sketch. **07**
- (b) Compare Shaper and Planner machine. **07**
- Q.4** (a) Draw block diagram of a Planer machine & label its parts. **07**
- (b) List different milling operation and explain any five with neat sketch **07**
- OR
- Q.4** (a) Explain different Milling methods with neat sketch. **07**
- (b) Explain marking system of grinding wheel in chart form **07**
- Q.5** (a) Explain different steps involved in making a casting process with its application. **07**
- (b) Draw neat sketch of Gating system and label its parts with its function. **07**
- OR
- Q.5** (a) List different types of Rolling mills and explain any one with neat sketch **07**
- (b) Describe the principal of metal Spinning with neat sketch **07**

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