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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. 0.1 Explain need of Attitude, knowledge & Skill required for shop floor 07 (a) Supervisor in machine tools Industries. Compare 3 jaw and 4 jaw Chuck with its neat sketch. 07 (b) **Q.2** Explain different Lathe operation any five with neat sketch. 07 (a) Calculate metal removal rate with following given data: (b) 07 Dia. of a iob = 40 mmRPM = 80Feed Rate = 0.015 mm/RevDepth of cut = 0.5 mmLength of Job = 160 mmOR Explain Thread cutting operation on lathe with neat sketch (b) 07 **Q.3** Explain function & properties of good cutting fluid. 07 (a) (b) List different types of drill tool. Explain any two with neat sketch. 07 List different operations performed on drilling machine and explain any **07** Q.3 (a) five with neat sketch. (b) Compare Shaper and Planner machine. 07 0.4 Draw block diagram of a Planer machine & label its parts. 07 (a) (b) List different milling operation and explain any five with neat sketch **07 Q.4** Explain different Milling methods with neat sketch. 07 (a) (b) Explain marking system of grinding wheel in chart form 07 0.5 (a) Explain different steps involved in making a casting process with its 07 application. Draw neat sketch of Gating system and label its parts with its function. (b) **07** OR **Q.5** List different types of Rolling mills and explain any one with neat sketch **07** (a) **07** (b) Describe the principal of metal Spinning with neat sketch
