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## GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI • EXAMINATION - WINTER • 2014

Subject Code: 160206 Date: 08-12-2014 **Subject Name: Total Quality management** 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. **Q.1** Discuss Importance of **TQM** comparison quality-**07** (a) in to inspection/control/assurance Discuss TOM Road Map and state when it fails. 07 Explain how 14 point philosophy from Deming for TQM is beneficial to business **Q.2 07** and customer satisfaction. (b) State different definitions of Quality given by different quality gurus and 07 discuss internal & external customer concept for TOM. (b) Draw a house of quality and discuss how it can be used a continuous 07 improvement tool for customer satisfaction and business improvement. 0.3 (a) Draw Ishikawa diagram for poor fuel economy (effect) - cause as a man, 07 machine, method, materials & environment. Explain the Transition TQM model with schematic representation. 07 OR State Pareto principal. Justify "vital few and trivial many" by taking suitable **Q.3** (a) 07 example of Pareto chart. **(b)** Discuss relationship between quality and cost? Explain **07** PAF(prevention/appraisal/failure) model for cost of quality Define  $C_p$  and  $C_{pk}$  Discuss six sigma is an effective tool for customer 0.4 07 satisfaction. Discuss '5S' as a workplace management tool for continuous improvement. **(b) 07** OR **Q.4** Explain Quality Auditing with its advantages. 07 (a) Explain Quality Circle Philosophy. **07 (b)** Q.5 Explain the different steps involved in FMEA. 07 (a) Define the following terms: 07 a) Reliability b) Failure Density c) MTTF d) MTBF e) Failure Rate b) f)Achieved Availability g) Operational Availability **Q.5** Explain OEE model for continuous improvement. 07 (a) (b) Discuss importance of *Team Building* for successful implementation of TQM 07

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