

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE – SEMESTER – VI EXAMINATION – WINTER 2015**

**Subject Code:160206****Date:11/12/ 2015****Subject Name: Total Quality management****Time:2:30pm to 5:00pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Define the term “Quality”. Enlist drivers of Quality and Explain it **07**  
 (b) Explain the different steps involved in FMEA **07**
- Q.2** (a) What is brain storming? Explain each types of it and also write down the guidelines for effective brain storming. **07**  
 (b) Explain Quality Circle Philosophy **07**
- OR**
- (b) Explain customer satisfaction model with schematically representation. **07**
- Q.3** (a) Using a matrix of QFD, explain both two principal parts horizontal and vertical **07**  
 (b) Define Process capability (Cp) and Process capability index (Cpk). Discuss six sigma is an effective tool for customer satisfaction **07**
- OR**
- Q.3** (a) Distinguish clearly between:- **07**  
 (i) Vision statement & Mission statement  
 (ii) Efficiency Vs Effectiveness  
 (b) Discuss relationship between quality and cost? Explain PAF(prevention/appraisal/failure) model for cost of quality **07**
- Q.4** (a) List 12 steps of problem solving process and explain each of them with neat sketch. **07**  
 (b) What 5s stands for quality ambience? Explain the methodology to implement 5s technique. **07**
- OR**
- Q.4** (a) Differentiate between the group and the team and explain team building concept. **07**  
 (b) What is Quality Planning ? Discuss about SWOT analysis briefly. **07**
- Q.5** (a) Explain how 14 point philosophy from Deming for TQM is beneficial to business and customer satisfaction **07**  
 (b) Discuss the concepts and benefits of ISO 14000 series certification **07**
- OR**
- Q.5** (a) Define the following terms: **07**  
 a) Reliability b) Preventive maintenance c) Mean failure rate d) Mean time to failure e) Failure Rate f) Achieved Availability g) Operational Availability  
 (b) Discuss TQM Road Map and state when it fails **07**

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