| Seat No.: | Enrolment No. |
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## **GUJARAT TECHNOLOGICAL UNIVERSITY**

ME – SEMESTER II– EXAMINATION – WINTER - 2016

|     | •          | Code: 2724603 Date: 17/11/ 2016  |          |
|-----|------------|--|----------|
| Tin | -          | Name: Quality Engg. & Six Sigma Fundamentals<br>:30 pm to 5:00 pm Total Marks: 70  |          |
| mst | 1.<br>2.   | Attempt all questions.  Make suitable assumptions wherever necessary.  Figures to the right indicate full marks  |          |
| Q.1 | (a)        | Define quality. Select a product and describe how the dimensions of quality influence its acceptance.  | 07       |
|     | (b)        | •  | 07       |
| Q.2 | (a)        | Enumerate 4 absolutes of quality management given by Crosby. Also mention his 14 steps to quality improvement.   | 07       |
|     | (b)        | Explain the five stages of Quality culture. In which stage do you think does the Indian industry fit in under the current scenario?  OR  | 07       |
|     | (b)        | Explain the various steps involved in building house of quality by selecting suitable example.   | 07       |
| Q.3 | (a)        | Name the common statistical tools that are used in industries. How would you identify the "Vital few" causes in your approach to a problem solving?  | 07       |
|     | (b)        | The state of the s | 07       |
| Q.3 | (a)        | What do you mean by process capability? What is the significance of normal curve in quality control? Explain.  | 07       |
|     | (b)        | Discuss the problem solving method for process improvement with an example.  | 07       |
| Q.4 | (a)        | Enumerate the seven magnificent quality tools which form a significant part of the Six Sigma tool kit.   | 07       |
|     | (b)        | Wais zero quality control? What is poka-yoke? Explain the three components of zero quality control.  | 07       |
|     |            | OR   |          |
| Q.4 | (a)<br>(b) | What is six sigma methodology? Describe the DMAIC problem solving methodology. Write short note on "Kaizen".   | 07<br>07 |
| Q.5 | (a)        | How does the conceptual approach to ISO 14001 differ from ISO 9001?  | 07       |
| ٧.٠ | (b)        | Describe the QFD process with the help of a flow diagram.  OR  | 07       |
| Q.5 | (a)        | Describe how marketing, human resources, and finance/accounting can contribute to the  | 07       |

(b) "Application of TQM in manufacturing and service industry" – Discuss

QFD process

07