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B.E. (Mechanical Engineering) (Semester - VII)**Examination, May - 2017****TOTAL QUALITY MANAGEMENT (Elective - II)****Sub. Code : 67833**

Day and Date : Friday, 19 - 05 - 2017

Total Marks : 100

Time : 2.00 p.m. to 5.00 p.m.

- Instructions :
- 1) All questions are compulsory.
 - 2) Figures to the right indicate full marks.
 - 3) Make suitable assumptions wherever necessary and state them clearly.
 - 4) Use of statistical tables and scientific calculator is permitted.

Q1) Solve any Two.

- a) "Quality means satisfied customer". Elaborate with suitable examples. [8]
- b) A good process does not produce a bad product. Why? [8]
- c) How Q.A. differs from Q.C. What are the roles and objectives of Q.A? [8]

Q2) Solve any Three.

- a) How Quality Plan is prepared? What all is included in Quality Plan? [6]
- b) APQP has five steps. Elaborate each briefly. [6]
- c) Describe a disciplined problem solving process, step by step. [6]
- d) What is process capability? On which factors does it depend? [6]

Q3) Solve any Two.

- a) On which factors product and system reliability depends? Why robust and reliability approach is considered important for Quality? [8]
- b) Taguchi's approach emphasizes upon-concept design, parameter design and tolerance design. How this leads to robust design so that product is of high quality and is defect free. [8]
- c) A computer system is composed of four identical terminals in series. If the required system reliability is 0.999, calculate reliability of each component. [8]

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Q4) Solve any Two.

- a) What benefits an organization reaps if it works on TQM principles? [8]
- b) Compare Deming's approach with Philip Crosby's approach. Where do they differ? [8]
- c) How Juran links Quality Planning with Quality Control and Quality Improvement? [8]

Q5) Solve any Three.

- a) Customer focus is the key parameter of Quality Management System. What steps an organization needs to take to ensure customer focus throughout organization? [6]
- b) How Quality Policy and Quality Objectives are linked? What purpose they serve? [6]
- c) 5S is not merely cleanliness, but it is cultural change. Explain. [6]
- d) TEI is most important for the success of TQM. Why? How to achieve this? [6]

Q6) Solve any Two.

- a) Service quality is an ever changing concept. Design measurement system for service quality. [8]
- b) ISO:9001:2008 is based on Process Approach. Draw and explain the salient features. [8]
- c) What are the criteria used to decide winner of Rajiv Gandhi National Quality Award? [8]

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