

**COLLEGE OF ENGINEERING, PUNE.**  
(AN AUTONOMOUS INSTITUTE OF GOVT. OF MAHARASHTRA)

**END SEMESTER EXAMINATION**  
**(PE-461) Total Quality Management**

**Programme: B. TECH. (PRODUCTION)**

Year: 2013-14

Semester: **I**

Duration: 3 hr

Max. Marks: 60

Instructions:

1. **Solve any SIX questions**
2. Electronic non-programmable calculator is permitted.
3. Figures to right indicate full marks.

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|-----|---|---|
| Q.1 | a) Explain the Juran's Trilogy and ten steps to quality improvement   | 7 |
|     | b) Explain the 5'S methodology used for housekeeping under the Kaizen.  | 3 |
| Q.2 | a) What is meant by employee empowerment? Explain different conditions to create empowered environment.   | 5 |
|     | b) State and explain different types of Teams used in the organizations   | 5 |
| Q.3 | a) Explain the four categories of the cost of quality with suitable examples.   | 5 |
|     | b) Explain the concept of Pareto chart and its applications in manufacturing.   | 5 |
| Q.4 | a) What is meant by continuous improvement? State different tools used for continuous improvement with example only.                                | 5 |
|     | b) Why the quality policy to be demonstrated to the customer? State the different quality parameters which are to be demonstrated to the customers. | 5 |
| Q.5 | a) Explain the Hoshin Policy for the organization with neat example.  | 5 |
|     | b) State the principle of leadership as applicable to the TQM environment   | 5 |

- Q.6 a) Explain the WV model of continuous quality improvement. 3
- b) Explain the three stages and nine steps for proactive improvement to develop new products. 7
- Q.7 a) Explain the concept of Six Sigma and also explain different indices used in it. 5
- b) What is meant by societal learning revolutions? Explain different factors involved in it. 5