

GUJARAT TECHNOLOGICAL UNIVERSITY
B. E. - SEMESTER – VII • EXAMINATION – WINTER 2012

Subject code: 172504**Date: 27/12/2012****Subject Name: Quality Management and Reliability Engineering****Time: 10.30 am - 01.00 pm****Total Marks: 70****Instructions:**

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

Q.1 (a) Define Quality. What are the functions of Quality Management? **07**
(b) What do you understand by the benchmarking? What is its importance? **07**
How it is carried out?

Q.2 (a) Why standardization is carried out? What is the importance of Bureau of **07**
Indian Standard? What are its duties?
(b) What do you understand by ISO? State its levels. Mention its importance in **07**
the field of quality. How it can be achieved?

OR

(b) What is the meaning of Quality Assurance? How it is carried out? **07**

Q.3 (a) Classify the services. How quality of service is measured? What do you **07**
understand by cost of quality?
(b) Describe prevention cost, appraisal cost, internal failure cost and external **07**
failure cost in detail.

OR

Q.3 (a) Explain the term six sigma. What is the requirement for achieving six **07**
sigma? How it can be achieved? Give examples.
(b) What is QFD? Where it is applicable? State the elements of quality house. **07**
How the quality house is prepared?

Q.4 (a) Give the status of quality levels in Indian industries with suitable examples. **07**
How it can be improved?
(b) Explain the term Reliability. How it is important in manufacturing? How it **07**
is related with quality? How it can be improved?

OR

Q.4 (a) What is robust design? How the Taguchi Method is applicable for robust **07**
design? Explain with suitable example.
(b) Describe the terms MTBF, MTTR and FMECA with their respective **07**
applications.

Q.5 (a) What do you understand by POKA YOKE? How this concept is utilized? **07**
(b) Describe seven magnificent quality tools. **07**

OR

Q.5 (a) What is the difference between General Maintenance and Total Productive **07**
Maintenance? Where TPM is applicable? Explain with example.
(b) Describe Juran's contribution in Total Quality Management. Give the **07**
names of other contributors in TQM.
