

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII EXAMINATION – SUMMER 2025

Subject Code:3172507

Date:27-05-2025

Subject Name:Quality Engineering and Management

Time:02:30 PM TO 05:00 PM

Total Marks:70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

MARKS

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|------------|--|-----------|
| Q.1 | (a) Define Quality according to various Quality Guru. | 03 |
| | (b) Give the objectives of TQM. | 04 |
| | (c) Explain Deming's fourteen point philosophy for quality improvement. | 07 |
| Q.2 | (a) What is Strategic Quality Management? | 03 |
| | (b) Explain about quality council and quality planning. | 04 |
| | (c) What is COPC-2000 Gold standard? Explain various clauses of it. | 07 |
| | OR | |
| | (c) Explain the PDCA improvement cycle in detail. | 07 |
| Q.3 | (a) What do you meant by Quality Circles? | 03 |
| | (b) What is Benchmarking and why do the organizations adopt this technique? | 04 |
| | (c) Explain seven quality tools in detail. | 07 |
| | OR | |
| Q.3 | (a) Define Quality assurance. | 03 |
| | (b) Differentiate between variables & attributes. | 04 |
| | (c) Explain the seven steps plan to establish the TPM in an organization. | 07 |
| Q.4 | (a) Differentiate prevention costs and appraisal costs. | 03 |
| | (b) Discuss the concept of acceptance sampling. | 04 |
| | (c) Enlist Crosby's Fourteen steps for quality management. | 07 |
| | OR | |
| Q.4 | (a) Differentiate between patent & copyright. | 03 |
| | (b) Discuss control charts for variables. | 04 |
| | (c) Explain the concept of Taguchi's quality loss function in detail. Give an example. | 07 |
| Q.5 | (a) Explain QFD. | 03 |
| | (b) Explain the Gap Model for measuring service quality. | 04 |
| | (c) What is 6-sigma? Explain the relevance of 6-sigma concept in achieving quality output in a process. | 07 |
| | OR | |
| Q.5 | (a) Define intellectual property. | 03 |
| | (b) State the importance of IPR. | 04 |
| | (c) Discuss TRIPS and explain its implications. | 07 |
