

Unit I 2 mark Questions & Answers
BASIC CONCEPTS OF QAULTY

1. Define quality.

Quality is the totality of characteristics of an entity that bear on its ability to satisfy stated and implied needs. - ISO

2. List the dimensions of quality.

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|-----------------|-------------------|----------------|
| 1. Performance, | 2. Features, | 3. Conformance |
| 4. Reliability, | 5. Durability | 6. Service, |
| 7. Response, | 8. Aesthetics and | 9. Reputation. |

3. What do you mean by quality planning?

It is a strategic planning process in which quality is embedded in each and every step.

4. Where we use the quality planning road map?

The quality planning road map can be applied at the following levels:

1. Supervisory and worker level,
2. Functional level,
3. Multifunctional systems, and
4. Major programmes.

5. Define quality costs?

Quality costs are defined as those costs associated with the non-achievement of product / service quality as defined by the requirements established by the organisation and its contracts with customers and society.

6. List the categories of quality costs.

1. Cost of prevention,
2. Cost of appraisal,
3. Cost of internal failures, and
4. Cost of external failures.

7. What is meant by cost of prevention?

Prevention costs are the costs that are incurred on preventing a quality problem from arising.

8. List the elements of cost of prevention.

Cost of prevention includes:

- (i) cost of quality planning,
- (ii) cost of documenting;
- (iii) Process control cost;
- (iv) cost of training;
- (v) Costs associated with preventing recurring defects, *etc.*

9. What is cost of appraisal?

Appraisal costs are the costs that are incurred in assessing that the products / services conform to the requirements.

10. What are the costs of appraisal?

Cost of appraisal includes:

1. Cost of receiving test and equipment;
2. Cost of laboratory acceptance testing;
3. Cost of installation testing;
4. Cost of installation and commissioning;
5. Cost of maintenance and calibration of testing and inspecting equipments.

11. What is meant by cost of internal failures?

The costs associated with defective products, components and materials that fail to meet quality requirements and result in manufacturing losses are called as costs of internal failures. These costs are linked to correcting mistakes before delivery of the product.

12. List the components of cost of internal failures.

Costs of internal failures include:

1. Cost associated with scrap and rejects;
2. Cost of repair and rework;
3. Cost of design changes;
4. Cost of trouble shooting;
5. Cost of re-inspection and retesting; *etc.*

13. What is meant by cost of external failures?

It consists of the costs which are generated because of defective products being shipped to customers. These costs are associated with the adjustments of malfunctions after delivery of the product.

14. What are the elements of cost of external failure?

Cost of external failures includes:

1. Cost of processing complaints from customers;
2. Cost of commissioning failures;
3. Cost of servicing or replacing the defective items;
4. Cost of guarantee and warranty claims;
5. Cost of lost goodwill of customers; *etc.*

15. What are the techniques commonly used for analyzing the quality costs?

The techniques used for analyzing the quality costs are:

1. Trend analysis, and
2. Pareto analysis.

TOTAL QUALITY MANAGEMENT

16. Define TQM.

Total Quality Management is the management approach of an organisation, centered on quality, based on the participation of all its members and aiming at long-term success through customer satisfaction, and benefits to all members of the organisation and to society - ISO.

17. What are the six basic concepts that a successful TQM programme require?

1. Top management commitment,
2. Focus on the customer,
3. Effective employee involvement,
4. Continuous improvement,
5. Treating suppliers as partners, and
6. Establishing performance measures.

18. What are the elements of TQM?

Three elements of TQM include:

1. **The philosophical element:** It includes leadership, continuous improvement, employee participation and development, design quality and prevention, partnership development, etc.
2. **The generic tools:** These include SPC tools, QFD, new seven management tools, and FMEA.
3. **QC department:** It consists of SQC methods, benchmarking, Taguchi methods, and TPM.

19. What are the pillars of TQM?

The four pillars of TQM are:

1. Problem solving discipline;
2. Interpersonal skills;
3. Teamwork; and
4. Quality improvement process.

20. List out any four barriers to TQM implementation.

1. Lack of management commitment.
2. Lack of employees' commitment.
3. Lack of effective communication.
4. Lack of continuous training and education.

Sixteen mark questions

1. Explain the fourteen principles of Deming?
2. Explain the barriers for implementing TQM?
3. Explain on Juran's ten steps to quality improvement.
4. Explain fourteen points for quality?
5. What are the different definitions given for quality? Explain how it got evolved and what are its prime concerns.
6. Explain the basic concepts of TQM?
7. Elucidate the TQM framework and awareness.
8. Explain Juran's 'Quality Trilogy' in detail.

