



**Note:** 1) Q. No. 1 is compulsory

- 2) Attempt any three from the remaining question.
- 3) Support your answer with Flow charts, block diagram, figures wherever required.
- 4) Numbers in bracket to right hand side indicates the marks.

**Q. No. 1 COMPULSORY (Any Four)**

- (a) Acceptance sampling in inspection (05)
- (b) Quality council and quality circles (05)
- (c) Concurrent Engineering (05)
- (d) Business process Re-engineering (05)
- (e) Variable Chart & Attribute Chart (05)

**Q. No. 2**

- (a) Explain KANO s model and explain satisfied customer, dissatisfied customer and delighted Customer (10)
- (b) Take any product of your choice and make a house of quality and deploy elements of quality to address customer's voice. (10)

**Q. No. 3**

- (a) Benchmarking is prerequisite for Business process engineering. Explain (10)
- (b) Waste elimination and value addition is core of Lean. Discuss (10)

**Q. No. 4**

- (a) Chronic problems are due to ignorance of sporadic problem. How will you diagnose that problem is chronic or sporadic? Discuss with an example. (10)
- (b) What is six Sigma? Explain in brief (i) DPMO (ii) DMAIC (iii) DFSS (10)

**Q. No. 5**

- (a) What is Reliability & Durability? Explain with reliability curve (bath tub curve). Also explain Mean Time To Failure and Mean Time Between Failure (10)
- (b) External failure cost is killer to a company. Discuss in detail with the help of Appraisal cost and Prevention cost. (10)

**Q. No. 6 Write short note on**

(05 x 04=20)

- (a) Seven old tools of Total Quality Management
- (b) SIPOC
- (c) Push-Pull in Supply chain management
- (d) Dimension of Quality

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