

[Time: Three Hours]

[Marks:80]

Please check whether you have got the right question paper.

- N.B:
1. **Question.No.1 is compulsory.**
 2. Attempt **any three** questions from the remaining.
 3. Figures to right indicate fill marks.
 4. Make and state the assumption clearly whenever required.
 5. Answers to the same questions should be grouped together.
 6. Provide neat sketches and suitable assumptions whenever necessary.

- Q1.** Solve the following (20)
- a) Explain the various dimensions of quality.
 - b) What is benchmarking? What are its benefits?
 - c) TQM approach is customer oriented, explain.
 - d) What is quality improvement? How is it different from quality planning and quality control?
- Q2.**
- a) Define and explain use of fishbone diagram and Pareto's charts. (10)
 - b) Explain the concept of internal customer with the help of a suitable example. (10)
- Q3.**
- a) Explain \bar{x} and R charts and their use in quality monitoring. (10)
 - b) What is an OC curve? Explain its significance. (10)
- Q4.**
- a) Explain QFD as a process. substantiate your answer with a suitable example (10)
 - b) Explain: (i) Attribute (ii) single sample (iii) double sample (iv) sequential sample. (10)
- Q5.**
- a) Explain various provisions of ISO 9001: 2000 quality management system. (10)
 - b) Explain Shainin concept of quality with a suitable example. What are the significant benefits of Shainin tool? (10)
- Q6.**
- a) Explain six sigma approach in TQM and its significant benefits. (10)
 - b) Explain the approach for vendor evaluation and vendor selection in TOM. (10)