

M.Tech-CAD/CAM (CBCS) Sem I  
**PCDS142 - Elective-I : Total Quality Systems and Engineering**

P. Pages : 1

Time : Three Hours



**GUG/S/18/10313**

Max. Marks : 70

- Notes :
1. All questions carry equal marks.
  2. Answer **any five** questions.
  3. Due credit will be given to neatness and adequate dimensions.
  4. Assume suitable data wherever necessary.
  5. Diagrams should be given wherever necessary.
  6. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) What are the principles of quality management? Explain them in brief. 7  
b) Who are the pioneers of TQM? What is their contribution in the field of TQM? 7
2. a) Explain ISO-9000 what are the components of ISO-9000? Where they are applicable. 7  
b) Mention few important quality awards, given worldwide to manufacturing and service organisation. 7
3. a) Explain the concept of Quality circle in detail with suitable example. 7  
b) Explain the concept of 'Quality Function Development' in brief. 7
4. a) Explain in short about the methods and philosophy of statistical process control. 7  
b) Explain control chart for variables. Give one example. 7
5. a) What is the role of J.I.T. in total quality system? What are its advantages and limitation. 7  
b) Explain the concept of 'POKA-YOKE' in brief with suitable example. 7
6. a) Differentiate between cumulative sum and exponentially weighted moving average control chart. 7  
b) Explain double sampling plan for attributes. 7
7. a) Write in detail about six sigma manufacturing. Explain each step with one example. 7  
b) Explain sequential sampling plan for attributes. 7
8. Describe the following. 14
  - a) Benchmarking.
  - b) KAIZEN.
  - c) Single Vendor Concept.

\*\*\*\*\*