

(3 Hours)

Marks 80

- N.B. 1 Question number ONE is compulsory
2 Attempt any THREE questions out of remaining FIVE
3 Figure to right indicate full marks
01. Answer the following (any four) **20**
- (a) Explain the principles of total quality management
 - (b) Discuss about supply chain management and its relevance in TQM, highlight the types key elements and major task
 - (c) State the primary objectives of six sigma?
 - (d) Write the significance of top management commitment quality
 - (e) Write a short note on cause and effect diagram
02. (a) Explain the approach and barriers in implementation of TQM **10**
- (b) Explain on Juran's ten steps to quality improvement **10**
03. (a) Discuss the reasons for bench marking and state the advantages and limitations **10**
- (b) What is customers, users and consumers? Describe in detail various types of customers. **10**
04. (a) What is product life cycle? Explain in detail the product life cycle. **10**
- (b) Explain the approach for vendor evaluation and vendor selection in TQM **10**
05. (a) Explain management of controllable defects and operator controllable defects in quality improvement **10**
- (b) What are the requirement of Failure Mode and effect analysis? Cite the purpose, reliability and the process of FMEA **10**
06. (a) Enumerate various control chart for variables and indicate how they are useful in process control **10**
- (b) What are the benefits of ISO 9000 certification? How does it help in quality improvement? Describe the requirement of ISO 9000 certification **10**