## I. BASIC CONCEPTS OF TOTAL QUALITY MANAGEMENT

### Part A

1. Define quality
2. State the various dimensions of quality
3. What is brainstorming
4. List the objectives of brainstorming
5. Define TQM
6. List the elements of TQM
7. List out the elements of TQM
8. What are the pillars of TQM
9. Name the basics of TQM

### Part B

1. Write the characteristics of TQM
2. State the benefits of TQM
3. What is quality council
4. What is vision statement
5. What is mission statement
6. What is meant by strategic planning
7. Write the seven step procedure of strategic planning
8. Which types of companies should go for ISO 9001 certificate
9. What is customer delight

### Part C

1. Explain ten principles of TQM
2. Draw the flow diagram activities in brain storming
3. List the various stumbling blocks while implementing a TQM program
4. What is strategic planning? Explain the different steps in implementing
5. Write down the step by step procedure of achieving the ISO 9000 registration

## 2. CONTINUOUS PROCESS IMPROVEMENT-Q7 TOOLS

### Part A

1. What are the three elements of Juran trilogy
2. What are the phases of Deming wheel(PDCA cycle)
3. What is 5S practice
4. What is SEITON
5. What is SEIRI
6. What is KAIZEN
7. What is check sheet
8. Where do you use check sheet
9. What are the types of check sheet
10. What is histogram

### Part B

1. What are cause and effect diagram
2. Draw a basic cause and effect diagram
3. What is the purpose of Paretto diagram
4. What is scatter diagram
5. List the various techniques to sustain continuous improvement
6. What is a quality circle
7. Name the seven tools of quality control
8. What is stratification analysis
9. What are run charts
10. What are the benefits of quality circle

### Part C

1. Give Juran's ten steps to quality improvement
2. What is 5S? Explain all the elements of 5S in detail
3. What are the various aspects of KAIZEN
4. Explain KAIZEN methodology
5. Discuss in detail about quality circles
6. What is scatter diagram? Write the procedure to construct scatter diagram

## 3. STATISTICAL FUNDAMENTALS

### Part A

1. Define data
2. Define information
3. What are the types of data
4. Define mean
5. Define median
6. Define mode
7. How frequency distribution is represented
8. Give any two methods of graphical representation of frequency distribution
9. What is the use of frequency distribution
10. What do you mean by central tendency

### Part B

1. What are the different measures of dispersion
2. What is dispersion
3. Define coefficient of variation
4. What is sigma
5. What is six sigma
6. What is normal curve
7. How six sigma is related to TQM
8. Why do we need six sigma state

### Part C

1. Explain the various methods that are used for graphical representation of a frequency distribution
2. Discuss why standard deviation is considered to best measures of dispersion
3. Explain briefly the concept of six sigma and state the principles
4. Explain six sigma organization
5. Problems based on central tendency, dispersion and coefficient of variation

## 4. CONTROL CHARTS

### Part A

1. What is control chart
2. What are the types of control chart
3. What is the use of control chart
4. Under what condition attributes chart are used
5. What is attributes chart
6. What do you mean by control charts for attributes
7. What are P & C charts
8. Write three limits for a control chart for P
9. Compare variable chart with attribute chart

### Part B

1. When are C charts used
2. Define process capability
3. What is process capability index
4. What is the purpose of process capability index
5. When U chart is used
6. Give the types of variations
7. Define fraction defective
8. Differentiate defect and defective

### Part C

1. Describe the steps to be followed for construction of attribute chart with example
2. What control charts are used for attributes
3. How do you draw control charts and interpret for controlling the variability? Explain.
4. Briefly describing the process of constructing a P chart
5. Compare variable charts and attribute charts
6. Problems based on attributes chart and variable chart (P,NP) and process capability index

## 5. MANAGEMENT PLANNING TOOLS & BENCH MARKING

### Part A

1. List the new management planning tools
2. What is affinity diagram
3. What is a radar diagram
4. When do you use the affinity diagram
5. What is relationship diagram
6. What are the purpose of tree diagram
7. Under what situations, one can use matrix diagram
8. List the symbols used for arrow diagram

### Part B

1. Why arrow diagrams are called PERT diagrams
2. What is prioritization matrix
3. Define bench marking
4. List the pit falls of bench marking
5. Define JIT
6. What is TPM
7. Write the objectives of implementing TPM
8. List the benefits of implementing TPM

### Part C

1. Explain the various steps in implementing TPM
2. Explain the steps in benchmarking processes
3. Explain the construction of decision tree
4. Briefly explain how a arrow diagram is constructed
5. Explain briefly the drawing method of drawing matrix diagram
6. Describe the methodology of constructing an affinity diagram by using an example