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Register No.:
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# April 2018

#### <u>Time - Three hours</u> (Maximum Marks: 75)

- [N.B: (1) Q.No. 8 in PART A and Q.No. 16 in PART B are compulsory. Answer any FOUR questions from the remaining in each PART - A and PART - B
  - (2) Answer division (a) or division (b) of each question in PART C.
  - (3) Each question carries 2 marks in PART A, 3 marks in Part B and 10 marks in PART C. ]

#### PART - A

- 1. Define the term quality.
- 2. What are the dimensions of quality?
- 3. When run chart is used?
- 4. Define frequency distribution.
- 5. List the various types of control charts.
- 6. When 'R' charts are used?
- 7. Write about radar diagram.
- Define concept of TPM.

### PART - B

- 9. State the quality statements of organization.
- 10. What is the purpose of scatter diagram?
- 11. Write the concept of quality circle.
- 12. Define mean, median and mode.
- 13. What is sampling techniques?
- 14. Write the objectives of control charts.
- 15. Write short notes on np chart.
- 16. List the objectives of bench marking.

[Turn over.....

## PART - C

17. (a) (i) What are the elements of TQM?

(ii) State the obstacles to TQM implementation.

(Or)

(b) (i) Discuss customer delight.

- (ii) Explain the various requirements of ISO 9001:2008 quality management system.
- 18. (a) (i) Explain PDCA cycle for continuous improvement. (ii) Describe Kaizen techniques.

(Or)

- (b) (i) Enumerate the cause and effect analysis for process improvement.
  - (ii) Describe the organization of QC and objectives of quality circle.
- 19. (a) (i) Write about the various types of data and collection of data.
  (ii) Discuss graphical representation of a frequency distribution.

(Or)

- (b) (i) State the measures of central tendency.
  - (ii) How will you build six sigma organization and culture?
- 20. (a) (i) Compare 'X' charts with 'R' charts.
  - (ii) How will you measure the process capability?

(Or)

- (b) (i) Write the steps in constructing 'P' charts.
  - (ii) Describe the 'C' charts for attributes.
- 21. (a) (i) Discuss tree diagram with a neat sketch.
  - (ii) Explain the construction of matrix data analysis diagram.

(Or)

- (b) (i) State the concepts and objectives of Just In Time.
  - (ii) Enumerate the detailed steps in implementing TPM.