

Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
**EIGHTH SEMESTER B.TECH DEGREE EXAMINATION, MAY 2019**

**Course Code: IE488**

**Course Name: TOTAL QUALITY MANAGEMENT**

Max. Marks: 100

Duration: 3 Hours

**PART A**

*Answer any two full questions, each carries 15 marks.*

Marks

- 1 a) Write notes on: (7.5)
- i. Customer focus
  - ii. Customer orientation
- b) Explain Taguchi quality loss function. (7.5)
- 2 a) Define Total quality? Explain the Principles of TQM? (7.5)
- b) Explain Deming philosophy for TQM (7.5)
- 3 a) Define quality cost? What are the primary categories of Quality cost? (7.5)
- b) The following data is data given for x-bar and range chart (7.5)

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
	17.5	16.3	13.8	16.7	14.1
	15.3	18.4	17.2	11.3	12.5
	12.7	14.9	15.6	14.4	18.8
X-bar	15.16	16.53	15.53	14.13	15.13
R	4.8	3.5	3.4	5.4	6.3

( $A_2 = 0.577$ ,  $D_3 = 0$ ,  $D_4 = 2.114$ )

- i) Determine the control limits of X and R
- ii) Plot the chart and comment the process
- iii) Does it appear that the machine is capable of meeting the specification requirement

**PART B**

*Answer any two full questions, each carries 15 marks.*

- 4 a) Differentiate between quality assurance and quality control with example. (7.5)
- b) Explain PDCA cycle? (7.5)
- 5 a) What are the factors that KAIZEN focuses for continuous improvement? (7.5)
- b) Explain quality function deployment with examples. (7.5)
- 6 a) Draw the cause and effect diagram for low mileage in bus. (7.5)

- b) Describe a basic structure of house of quality. (7.5)

**PART C**

*Answer any two full questions, each carries 20 marks.*

- 7 a) What are the pillars of TPM. How are they implemented? (10)  
b) What is the need for standardization. (10)
- 8 a) What is six sigma quality and how is it achieved. (10)  
b) Why is ISO 9000 important? Explain briefly? (10)
- 9 a) Give an example of a company practicing six sigma concept. (10)  
b) Explain about ISO 9001:2000 (certificate process). (10)

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