Department of Computer Science & Engineering

IV Year VII Semester

7ME6-60.2: Quality Management

Note: Each assignment of Maximum Marks 10.All question carries equal marks.

ASSIGNMENT-I

Q1. What are the objectives of quality policy? Explain different types probability distribution.	BLT-1	CO-1
Q2. Describe variation, pattern of variation its interfaces about process quality. How analysis of variance is done?	BLT-2	CO-1
Q3. What is frequency distribution? Explain its type.	BLT-2	CO-1
Q4. Describe in detail quality and economics of quality.	BLT-2	CO-1
Q5. Explain different dimension of quality.	BLT-2	CO-1

ASSIGNMENT-II

Q1. How sample size and sampling frequency is decided? How did we analyse the patterns on the control chart?	BLT-3	CO-2
Q2. What is difference between Quality assurance and Quality control?	BLT-4	CO-2
Q3. What is statistical quality control? Write down the causes of variance.	BLT-2	CO-2
Q4. Write down application of variable control chart.	BLT-1	CO-2
Q5. The thickness of a printed circuit board is an important quality parameter. Data on board thickness (in inches) are given in Table 6E.4 for 25 samples of three boards each. (a) Set up and R control charts. Is the process instatistical control? (b) Estimate the process standard deviation. (c) What are the limits that you would expect to contain nearly all the process measurements? (d) If the specifications are at 0.0630 in. ± 0.0015 in.,	BLT-5	CO-2

TABLE 6E.4
Printed Circuit Board Thickness for Exercise 6.4

Sample Number	x_1	x_2	x_3
1	0.0629	0.0636	0.0640
2	0.0630	0.0631	0.0622
3	0.0628	0.0631	0.0633
4	0.0634	0.0630	0.0631
5	0.0619	0.0628	0.0630
6	0.0613	0.0629	0.0634
7	0.0630	0.0639	0.0625
8	0.0628	0.0627	0.0622
9	0.0623	0.0626	0.0633
10	0.0631	0.0631	0.0633

Department of Computer Science & Engineering

IV Year VII Semester

7ME6-60.2: Quality Management

ASSIGNMENT-III

Q1. What do you mean by SIX Sigma. Explain in detail?	BLT-1	CO-3
Q2. How control chart is selected between variable and attribute?	BLT-3	CO-3
Q3. Explain the processes capability analysis using a probability plot.	BLT-2	CO-3
Q4. How SPC work on short production run?	BLT-3	CO-3
Q5. Define the process capability analysis using a histograph or a probability plot	BLT-1	CO-3

ASSIGNMENT-IV

Q1. Explain the following: i) Field complaint ii) Quality survey iii) Quality audit iv) Quality ratting	BLT-2	CO-4
Q2. Explain the concept of quality assurance and list down the advantage of quality assurance?	BLT-2	CO-4
Q3. What are sampling plans explain in detail? Discuss the advantage and disadvantage of sampling.	BLT-1	CO-4
Q4. Explain in detail ISO 14000 principles.	BLT-2	CO-4
Q5. Explain in detail ISO 9000 principles.	BLT-2	CO-4

ASSIGNMENT-V

Q1. Write short note on i) Failure data analysis ii) Quality loss function iii) Pareto analysis design for reliability iv) Reliability optimization	BLT-1	CO-5
Q2. What are Redundancy and improvement factors evaluations?	BLT-1	CO-5
Q3. Define failure, types of failure, failure rate of models also MTBF.	BLT-2	CO-5
Q4. Explain Taguchi method of design of experiments?	BLT-2	CO-5
Q5. Write short note on Reliability evaluation and types of it.	BLT-1	CO-5

*BLT: BLT shows the **Bloom's taxonomy** levels.

Department of Computer Science & Engineering

IV Year VII Semester

7CS4-21: Internet of Things

Note: Each assignment of Maximum Marks 10.All question carries equal marks.

ASSIGNMENT-I

Q1.Differentiate between WiFi and WiMax.	BLT-3	CO-1
Q2.Explain about IoT communication APIs in detail.	BLT-2	CO-1
Q3. Explain IoT levels in detail.	BLT-2	CO-1
Q4. What is big-data and Why we are using big-data in IoT?	BLT-4	CO-1
Q5. What is the functions of communication functional block in and IoT system? Explain with diagram.	BLT-1	CO-1

ASSIGNMENT-II

Q1. Write the name of any 2 temperature sensors and explain their working.	BLT-2	CO-2
Q2. Explain the working principle of ultrasonic sensor.	BLT-2	CO-2
Q3.Explain the hardware configuration of Arduino with proper diagram.	BLT-3	CO-2
Q4. What is the difference between sensors and actuators? Explain with an example.	BLT-4	CO-2
Q5. What is RIoT OS? Explain in detail. Write a reason for not using the traditional OS in IoT system.	BLT-4	CO-2

ASSIGNMENT-III

Q1. What are the architectural constraints of REST?	BLT-1	CO-3
Q2. Write down the various challenges of IoT system.	BLT-2	CO-3
Q3. Explain the design, and development challenges in detail.	BLT-2	CO-3
Q4. Explain the levels of reference architectural model.	BLT-2	CO-3
Q5. Describe the various security issues in current IoT systems.	BLT-1	CO-3

ASSIGNMENT-IV

Q1. Differentiate between M2M and IoT systems.	BLT-4	CO-4
Q2. Explain software defined networks with suitable block diagram.	BLT-2	CO-4
Q3. Explain the various levels of network function virtualization.	BLT-2	CO-4
Q4. Elaborate the architecture of M2M communication system.	BLT-3	CO-4
Q5. What is the basic difference between 2-way FA and TM?	BLT-4	CO-4

ASSIGNMENT-V

Q1. Explain the application of IoT system in home automation.	BLT-2	CO-5
Q2. Explain the application of IoT system in logistics field with suitable example.	BLT-2	CO-5
Q3. Write down the advantages of automated healthcare equipment and the role of IoT in it.	BLT-1	CO-5
Q4. Explain the working of IoT based irrigation system.	BLT-2	CO-5
Q5. Draw the frame work of smart city and explain it in detail.	BLT-4	CO-5

*BLT: BLT shows the **Bloom's taxonomy** levels.