

GUJARAT TECHNOLOGICAL UNIVERSITY**B.E. Sem-IV Examination June- 2010****Subject code: 142502****Subject Name: Fundamentals of Quality Management****Date: 21 /06 /2010****Time: 10.30 am – 01.00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Describe the TQM philosophy and identify its major characteristics. **07**
 (b) Explain “Double Sampling Plan” with suitable example. **07**

- Q.2** (a) How will you build up “House of quality” for the implementation of Quality Function Deployment? Discuss step by step. **07**
 (b) The table-1 shows that successive lots of shafts are coming out of the machine. **07**
 The shafts are subjected to inspection for burrs. The shafts are inspected in samples of 100 each.

Compute and construct the Chart. Also make decision regarding quality of product and process control

TABLE-1

Sample No.	Sample Size	Defectives	Percentage
1	100	1	1
2	100	1	1
3	100	2	2
4	100	1	1
5	100	1	1
6	100	0	0
7	100	1	1
8	100	0	0
9	100	1	1
10	100	2	2
11	100	3	3
12	100	2	2
13	100	1	1
14	100	2	2
15	100	0	0
16	100	2	2
17	100	7	7
18	100	1	1
19	100	2	2
20	100	0	0

OR

- (b) The following Table-2 shows the number of defects on the surface of car bodies, on 20 Jan.2010. 07

Construct the appropriate control chart and give your comment.

TABLE-2

Dated	Body No.	No of defects
20-01-2010	1	2
20-01-2010	2	2
20-01-2010	3	4
20-01-2010	4	7
20-01-2010	5	5
20-01-2010	6	6
20-01-2010	7	7
20-01-2010	8	14
20-01-2010	9	2
20-01-2010	10	9
20-01-2010	11	3
20-01-2010	12	0
20-01-2010	13	5
20-01-2010	14	1
20-01-2010	15	3
20-01-2010	16	10
20-01-2010	17	4
20-01-2010	18	3
20-01-2010	19	12
20-01-2010	20	6

- Q.3** (a) Discuss purpose and objectives of Bureau of Indian standard (BIS) 07
 (b) Discuss strategic quality management system. 04
 (C) Write a short note on O.C.Curve. 03

OR

- Q.3** (a) Write short note on ISO 14000 07
 (b) Discuss role of soft wares in Quality management 04
 (C) Explain your views for the Quality development in India 03

- Q.4** (a) How will you justify cause and effect analysis as quality improvement process? Explain with suitable example. 07
 (b) Define and explain Design for six Sigma 07

OR

- Q.4** (a) Discuss key theme for Service quality management applications in enterprise. 07
 (b) Discuss Deming's fourteen points for Quality management. 07

- Q.5** (a) What is the Malcolm Baldrige National Quality Award? 07
 Why is this award important and what companies have received it in the past?
 (b) Discuss quality Management system 04
 (C) Describe each of the four costs of quality 03

OR

- Q.5** (a) Discuss the concept of Statistical Process Control and compare the same with Statistical Quality Control. 07
 (b) State the important objectives of Quality Control. Explain briefly how these objectives are achieved in Engineering Industry? 04
 (C) Discuss Juran's quality trilogy. 03
