

B. TECH.
(SEM VII) THEORY EXAMINATION 2018-19
TOTAL QUALITY MANAGEMENT

Time: 3 Hours

Total Marks: 100

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

Q.1 Attempt all the parts.

10/2 = 20

- a) State the dimensions of Quality?
- b) What do you mean by review of design?
- c) What is strategic sourcing?
- d) How claim analysis is done?
- e) What is the difference of reliability and maintainability?
- f) What do you mean by control chart for variables and attributes?
- g) What is the use of Ishikawa diagram and Pareto chart?
- h) Differentiate between MTTR and MTTF.
- i) What do you understand by Quality Audit?
- j) Explain ISO-14000 Quality management system.

SECTION B

Q.2 Attempt any three.

3 x 10 = 30

- a) Explain the procurement procedure in detail with the help of flowchart.
- b) What is TQM? Explain objectives of TQM.
- c) What is control chart? Discuss application of various charts. Write down the advantages also.
- d) Discuss the factors to be considered for organizational structure for Quality management.
- e) A production manager at a tire manufacturing plant has inspected the number of defective tires in twenty random samples with twenty observations each. Following are the number of defective tires found in each sample:

Sample Number	Number of defective tires	Number of observations sampled
1	3	20
2	2	20
3	1	20
4	2	20
5	1	20
6	3	20
7	3	20
8	2	20
9	3	20
10	2	20
11	3	20
12	2	20
13	2	20
14	1	20
15	1	20
16	2	20
17	4	20
18	3	20
19	1	20
20	1	20

Construct a three-sigma control chart ($Z = 3$) or p-chart with this information.

SECTION C

- Q.3 Attempt any one.** 1 x 10=10
- a) Explain Quality circles in detail.
 - b) Human factor is the most important element in Quality of a product. Justify.
- Q.4 Attempt any one.** 1 x 10=10
- a) What are the factors affecting reliability? Explain the evaluation of reliability. Discuss building reliability in the product.
 - b) Draw total product cost versus product reliability curve (bathtub curve). Explain in detail.
- Q.5 Attempt any one.** 1 x 10=10
- a) What is ISO? Explain Quality system ISO-9000.
 - b) State the objectives and challenges of JIT in detail.
- Q.6 Attempt any one.** 1 x 10=10
- a) Explain the objectives and steps of Taguchi method.
 - b) Discuss in detail the operating characteristics of Quality curves.
- Q.7 Attempt any one.** 1 x 10=10
- a) How the evaluation of supplier is done? Explain.
 - b) What do you understand by Quality functions? Explain in detail.