

**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 x2= 20**

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

## SECTION B

**Q.2 Attempt any three.**

$$3 \times 10 = 30$$

- Explain the procurement procedure in detail with the help of flowchart.
- What is TQM? Explain objectives of TQM.
- What is control chart? Discuss application of various charts. Write down the advantages also.
- Discuss the factors to be considered for organizational structure for Quality management.
- 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	1	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.

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