PAPER ID-420215

Subject Code: KOE085

Roll No: | | | | | | | | | | | | | |

BTECH
(SEM VIII) THEORY EXAMINATION 2021-22
QUALITY MANAGEMENT

Time: 3 Hours ***Total Marks: 70***

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 2 x 7 = 14

a.	Define Quality.
b.	What do you mean by procurement? Explain.
c.	What is prototype?
d.	Define SWOT analysis.
e.	What is R-chart?
f.	Define Quality hierarchy.
g.	What is Zero defect? Explain.

SECTION B

2. Attempt any *three* of the following: 7 x 3 = 21

a.	What do you mean by evolution of quality control? Discuss with suitable example.
b.	What is Quality Management? Discuss its various functions in detail.
c.	Discuss various human factors in quality attitude of top management.
d.	What are control charts? Discuss.
e.	What are the obstacles in implementing TQM? How it can be overcome?

SECTION C

3. Attempt any *one* part of the following: 7 x 1 = 7

(a)	Discuss in brief the methods to ensure the manufacturing quality.
(b)	Describe the process of evaluation of supplies with example.

4. Attempt any *one* part of the following: 7 x 1 = 7

(a)	Write a note on the organization structure and design of quality management.
(b)	Explain the following with example: (i). quality value and contribution, (ii). Quality cost and its optimization.

5. Attempt any *one* part of the following: 7 x 1 = 7

(a)	What do you mean by process capability study? Discuss with some example.
(b)	Explain the construction of Xbar and R control charts. Where are they used?

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6. Attempt any *one* part of the following: 7 x 1 = 7

(a) In the manufacture of armatures for electric motors, inspection results of 20 samples of each having 100 units of armature is given in the following table calculate the average fraction defective and the control limits construct, the p chart and comment on the process.

Lot No.	No. of Defective	Lot No.	No. of Defective
1	5	11	4
2	10	12	8
3	11	13	4
4	16	14	2
5	8	15	5
6	7	16	5
7	6	17	3
8	6	18	9
9	7	19	7
10	5	20	12

(b) In a factory producing spark plug the number of defective found in inspection of 20 lots of 100 each, is given below:

Lot No.	No. of Defective	Lot No.	No. of Defective
1	5	11	4
2	10	12	7
3	12	13	8
4	11	14	3
5	5	15	3
6	6	16	4
7	4	17	5
8	7	18	8
9	6	19	6
10	3	20	10

i. Construct a suitable control chart and state if the process is in control.
ii. Determine the sample size where a quality limit is not worse than 10% is desirable and a 11% bad producer will not be permitted more than three times per thousand.

7. Attempt any *one* part of the following: 7 x 1 = 7

(a) Write short note on the following: (i) MTTF, (ii). Maintainability, (iii) Quality circle.

(b) What is ISO-9000 and its concept to quality management?