

Roll No.

24481

**B. Tech. 7th Semester (ME)
(Common With Special Chance)
Examination – December, 2019**

QUALITY ENGINEERING

Paper : ME-417-F

Time : Three Hours] [Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt *five* questions in all, selecting *one* question from each Section. Question No. 1 is *compulsory*.

All questions carry equal marks.

- | | |
|---|---|
| 1. (a) What is Pareto analysis ? | 5 |
| (b) What is natural tolerance limit ? | 5 |
| (c) What is average outgoing quality protection ? | 5 |
| (d) What is FMEA ? | 5 |

24481-1,550 -(P-3)(Q-9)(19)

P. T. O.

SECTION - A

2. (a) What is Quality ? Explain its importance in industry? 10
(b) What are different cost reduction programmes? 10

3. (a) Explain the Quality function. 10
(b) Explain the ISO 9000 quality system standards. 10

SECTION - B

4. (a) What is normal probability distribution? 10
(b) Explain the statistical aspect of control charting in detail. 10

5. Explain the following: 20
(i) X and R charts.
(ii) Rational Sub- Grouping

SECTION - C

6. (a) What is acceptance sampling ? Explain the principle of acceptance sampling. 10

24481-1,550 -(P-3)(Q-9)(19) (2)

- (b) Explain the single, multiple and sequential sampling plans in detail. 10

7. Explain the Binomial, Poisson and Normal distribution with practical examples. 20

SECTION - D

8. (a) What is the role of senior management in TQM? 10

- (b) Explain the Taguchi quality loss function in detail. 10

9. Explain the following: 20
(a) JIT system
(b) Scatter diagram.

24481-1,550 -(P-3)(Q-9)(19) (3)