

Roll No.

24481

B. Tech. 7th Sem. (ME)

Examination – May, 2015

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. Question No. 1 is compulsory and attempt at least one question from each Section.

1. Explain the following :

5 × 4 = 20

- (a) Quality cost categories
- (b) QFD
- (c) Acceptance sampling by attributes.
- (d) Jit systems.

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SECTION – A

2. (a) What is pareto analysis and how is it used in analyzing quality cost data. 10
- (b) Discuss cost reduction programs and economics of quality. 10
3. What is the meaning and importance of quality in industry ? Explain it in detail with suitable examples. 20

SECTION – B

4. Discuss statistical tools in quality control. Also explain X and R, X and S and P, np charts with examples. 20
5. What is specifications and tolerances. Explain natural tolerance limits, specification limits and process capability ratio analysis. 20

SECTION – C

6. (a) Explain poisson and normal distribution with practical examples. 10
- (b) Explain acceptance sampling in detail. 10

7. (a) Explain Binomial distribution with suitable example. 10
- (b) Explain multiple and sequential sampling plans. 10

SECTION – D

8. What is TQM ? Explain in detail five basic concepts of TQM in an industry. 20
9. Explain the following :
- (a) Taguchi loss function. 7
- (b) Lean manufacturing continuous improvement techniques. 7
- (c) Pareto diagrams. 6
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