

Code No: 118EY

R13

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year II Semester Examinations, April - 2018

TOTAL QUALITY MANAGEMENT

(Mechanical Engineering)

Time: 3 hours

Max. Marks: 75

Note: This question paper contains two parts A and B. Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART - A

1. Write briefly on the following: (25 Marks)

- a) Attitude of top management towards TQM. [2]
- b) Acceptance sampling. [3]
- c) Quality by giving suitable examples. [2]
- d) Pitfalls of Benchmarking.. [3]
- e) Kepner and Tregoe Methodology. [2]
- f) Systems approach. [3]
- g) Pareto principle. [2]
- h) Quality Management. [3]
- i) Importance of ISO certification. [2]
- j) ISO around the world. [3]

PART - B

2.a) What is the role of process and product control on quality? (50 Marks)

b) List and discuss about Variable control charts. [5+5]

OR

3. A Textile Manufacturer wants to set up a control Chart for irregularities (Example, oil stains, shop soil, loose threads and tears) per 100 square meters of Carpet. The following data were collected from a sample of Fifteen 100 square meter pieces of Carpet.

Sample	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Irregularities	11	8	9	12	4	16	5	8	17	10	11	5	7	12	13

Using the data set up a C-chart and comment. Also comment on the state of the process if the next five samples had 15, 18, 12, 22 and 21 irregularities. [10]

4. Construct a Pareto chart for the following data. [10]

Type of defect	Surface Cracks	Loose Fittings	Poor illumination	Fluctuations in power	Cable problems
Frequency	85	305	180	65	265

OR

5.a) Discuss about buyer-supplier relationships towards building quality. [5+5]

b) What is Benchmarking? What are its benefits?

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6.a) Discuss the importance of quality on sales and marketing.
b) Write note on PDCA cycle.

[5+5]

OR

7.a) Write a note on Systems approach to TQM.
b) Discuss: Stratification, check sheet, Scatter diagram.

[5+5]

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8.a) List and discuss various costs of quality.
b) To what extent accounting system contribute in building quality?

[5+5]

OR

9.a) What are different quality costs? How do you measure?
b) What is the usefulness of information on quality to management?

[5+5]

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10.a) Discuss in detail standards of ISO9000 series.
b) What is cost of ISO certification?

[5+5]

OR

11.a) How do you document services associated with ISO9000 series?
b) What are the issues and benefits in ISO9000 certification?

[5+5]

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