

Code No: 118EY

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**B. Tech IV Year II Semester Examinations, May - 2017****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**(25 Marks)**

- 1.a) What is PDSA cycle? [2]
- b) What is inspection by variables? [3]
- c) Should the buyer-supplier relationship be based on trust or suspicion? Why? [2]
- d) What do you understand by delighting the customer? [3]
- e) Briefly point out the anatomy 'Quality circles'. [2]
- f) What is the purpose served by drawing fish-bone diagram? [3]
- g) Should quality be free? Why or why not? [2]
- h) Is there any relation between quality appraisal cost and failure cost? [3]
- i) For whom ISO 90003 certification is applicable? [2]
- j) Is ISO certification product based or process based? Explain briefly. [3]

PART - B**(50 Marks)**

- 2.a) What are the determinants of quality?
- b) Discuss the difference between traditional quality management and modern quality management. [5+5]

OR

3. 10 samples, each of size 50, of pipe were inspected in pressure testing. The results of the inspection are given below:

Sample No.	1	2	3	4	5	6	7	8	9	10
No. of defectives	2	3	2	0	2	3	2	1	2	3

Draw a p-chart and state your conclusion.

[10]

- 4.a) Who are internal customers? And who are external customers?
- b) How would you choose appropriate bench marks? [5+5]

OR

- 5.a) What are the limitations of bench marking?
- b) What is the relevance of marketing and customer focus to quality improvement? [5+5]

- 6.a) Where did the concept of quality circles come from? Trace its history in India.
 b) Construct a Pareto diagram for the analysis of internal failures for the following data:

Type of cost	Rupees in thousands
Purchasing -- rejects	205
Design --- scrap	120
Operations – rework	355
Purchasing -- rework	25
All other	65

[5+5]

OR

- 7.a) Draw a cause effect diagram for painting defects in your house.
 b) What is the role of top management in organizing transition to TQM? [6+4]
- 8.a) What are the problems of measuring quality costs accurately?
 b) Define quality cost? What is considered optimum quality cost? [5+5]

OR

- 9.a) What all costs of quality constitute external failure costs?
 b) Who should be presented with quality cost information? What should be the frequency of reporting? [5+5]
- 10.a) What are the objectives of ISO 9000?
 b) Which are the four tiers of documentation in ISO 9000? [5+5]

OR

- 11.a) What are the advantages of ISO 9000 standards to buyer and seller?
 b) What are the objectives of internal audit for ISO9000 standards? [5+5]

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