

**NATIONAL INSTITUTE OF TECHNOLOGY TIRUCHIRAPPALLI**

**Dept. of Metallurgical and Materials Engineering (MME)**

Question paper for **Semester Examination**

B.Tech. VIII Sem. (multiple branches) and B. Tech. (MME) – VI Sem.

**MT 458 INTRODUCTION TO QUALITY MANAGEMENT**

(Global Elective) (G slot)

Wednesday, May 7, 2014

2:00 pm – 5:00 pm

Max. Marks: 50

1. Write short notes on: (10)  
(a) Quality Policy      (b) Quality Audit      (c) QA      (d) TQM      (e) PDCA
  
  2. Write short notes on the following: (10)  
(a) Bath Tub Curve      (b) ZD      (c) Variance      (d) Warning Limits      (e) Process Capability
  
  3. Compare and contrast the philosophical approaches to quality, as proposed by Deming, Taguchi and Crosby. Emphasis may be placed on hypotheses wherein one exponent agrees with another; and on hypotheses wherein one disagrees with another. (10)
  
  4. (a) List two advantages and two disadvantages of acceptance sampling. (2)  
(b) Describe, briefly, how Operating Characteristics (OC) Curves, for single sampling plans, are constructed. Indicate, briefly, why cumulative Poisson tables are used in related calculations. (8)
  
  5. (a) Differentiate between quality and reliability. (2)  
(b) Considering yourself as a member of the NITT community and as a citizen of Trichy region, visualize a six sigma project which will benefit the community / society at large, with associated quality improvement and cost savings. The project should not be confined to engineering skills (such as machine design). Provide a short write – up indicating the nature of your project, present level of quality / competency, need for quality improvement and projected savings / benefits to the society. (8)
- 

Proposed methodology for evaluation of answer sheets: (considering the unreasonably large class size)

\$ Scheme of valuation / metrics will be provided to a team of MTech / PhD students, for valuation of answer sheets.

\$ Emphasis (for valuation) will be placed on key phrases / schematic provided (by students) in the answers.

\$ After valuation by cited team, the teacher intends to check nearly twenty answer scripts with very high marks and another twenty answer scripts with very low marks.

BEST WISHES.

SRS / 458 QM / **End Semester** / May 4 2014 / 360 i