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Name.....

Reg. No.....

EIGHTH SEMESTER B.TECH. (09 SCHEME) (ENGINEERING) DEGREE EXAMINATION, APRIL 2015

ME/PTME 09 804 L22—QUALITY ENGINEERING AND MANAGEMENT

Time : Three Hours Maximum : 70 Marks

Part A

Answer **all** *questions.*

I. (a) Define Total Quality Management.

(b) What is Benchmarking?

(c) What is the difference between attribute and variable?

(d) What is the purpose of life testing in reliability engineering?

(e) Define House of Quality.

(5 × 2 = 10 marks)

Part B

Answer any **four** *questions.*

II. (a) What are the advantages of Total Quality Management?

(b) Briefly explain the step-by-step procedure involved in preparing a Pareto diagram.

(c) What are the basic components of a control chart?

(d) Why are sample sizes for attributes necessarily larger than sample sizes for variables?

(e) Explain the terms "LTPD", "AOQ", "MTBF" and "AQL".

(f) Briefly explain the Fish bone diagram with an example.

(4 × 5 = 20 marks)

Part C

Answer **all** *questions.*

III. (a) Explain the different quality costs associated with various departments of an organization.

Or

(b) "Six Sigma is an effective tool for continuous improvement." Give a detailed explanation on the statement.

IV. (a) Explain Quality Function Development citing an example.

Or

Turn over

(b) Explain in detail the following quality management tools :

(i) Affinity diagram.

(ii) Tree diagram.

(iii) Matrix diagram.

V. (a) Explain in detail the different types of control charts available for problem solving.

Or

(b) Explain in detail the different types of probability distributions.

VI. (a) Distinguish between Consumer's risk and Producer's risk.

Or

(b) What is Acceptance sampling? Explain the difference between single and double sampling plans. How is the sample size determined in a single sample attribute plan.

(4 × 10 = 40 marks)