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Printed Pages : 4

EME-041/EPL-041

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 140757

Roll No.

B. Tech.

(SEM. VII) (ODD SEM.) THEORY EXAMINATION, 2014-15

TOTAL QUALITY MANAGEMENT

Time : 3 Hours] [Total Marks : 100

1 Attempt any FOUR parts : 5×4=20

a) Write short notes on MTTF.

b) Define the reliability. Sketch the product life cycle with its components.

c) List some of the essential requirements of the success of quality circle.

d) Summarize the challenges in identification of the defects.

e) Give the theory and implementation of zero defect in quality management.

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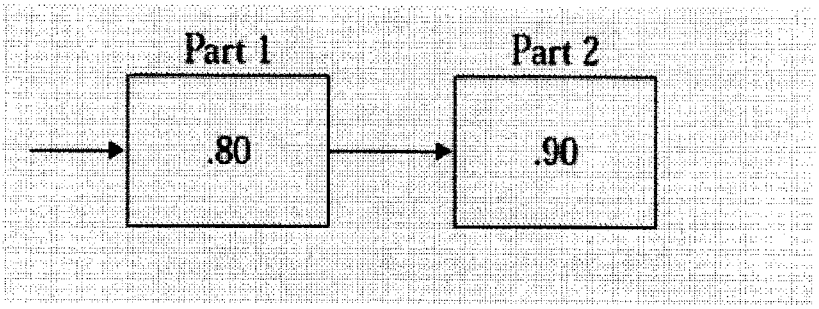
f) Assume that a product has two parts, both of which must work for the product to function. Part 1 has a reliability of 80 percent and part 2 has a reliability of 90 percent. Compute the reliability of the product.



2 Attempt any TWO parts : **10×2=20**

a) Explain briefly about the quality control in service and also about benefits of having guarantee policy in an organization.

b) List the Various Procurement procedure in detail.

c) Explain the basic principle and concept of achieving quality in design.

3 Attempt any TWO parts : **10×2=20**

a) Write short notes on :

I. Economics of quality value and contribution

II. Quality function

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b) What are the various responsibility factors to maintain the quality system?

c) Briefly explain the role of human in quality management. Justify your answer with an example.

4 Attempt any TWO parts : **10×2=20**

a) The following table shows the number of the number of point of defects on the surface of a bus body on March 2012.

I. Compute the value of $\bar{c}$ and its control limits

II. Draw c chart

III. Compute value of $\bar{c}$ and control limits for the future use, if you deem it necessary

Body number	No of Defects	Body Number	No of Defects
1	13	11	17
2	15	12	11
3	19	13	7
4	8	14	11
5	6	15	14
6	17	16	6
7	7	17	16
8	9	18	10
9	3	19	2
10	23	20	6

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b) Briefly explain how the process improvement can be done using control charts.

c) What are the steps for calculating and plotting an R Control Chart? Explain them in detail with example.

5 Attempt any TWO parts : **10×2=20**

a) Discuss about 20 elements of ISO 9000 standards.

b) What are the various steps in Tauguchi's loss function? Explain them in detail.

c) State the objectives and challenges of JIT in detail.
