

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

PAPER ID : 4028

Roll No.

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B.Tech.

SEVENTH SEMESTER EXAMINATION, 2006 - 07

TOTAL QUALITY MANAGEMENT

Time : 3 Hours

Total Marks : 100

- Note :**
- (i) Attempt *ALL* questions.
 - (ii) All questions carry equal marks.
 - (iii) In case of numerical problems assume data wherever not provided.
 - (iv) Be precise in your answer.

1. Attempt *any two* parts of the following : (10x2=20)
 - (a) How the quality of a service organization can be improved ? Discuss the Deming's 14 points for managing never-ending improvement.
 - (b) Why is inspection important in an industry ? Describe the various types of inspection methods.
 - (c) Discuss the various human factors that may affect the quality of a manufacturing organization.

2. Attempt *any two* parts of the following : (10x2=20)
 - (a) What do you mean by cost of quality ? Discuss various types of cost related to quality. How the total quality costs can be optimized for an organization.

- (b) Describe briefly the following :
- (i) quality planning
 - (ii) quality audit
- (c) Describe with suitable diagram, how quality can be controlled in a production environment. What are the functions of a quality control department ?
3. Attempt *any two* parts of the following : (10x2=20)

- (a) For the past six days, samples (weights) were taken for a process. Using the data given, create mean and range control charts for the process

Day of control	Sample values
Saturday	22, 19, 20
Sunday	21, 20, 17
Monday	16, 17, 18
Tuesday	20, 16, 21
Wednesday	23, 20, 20
Thursday	19, 16, 21

Assume Friday's samples as 15, 14 and 21, and using the chart constructed, find whether the process is in control ?

- (b) What is process capability ? How it is measured ?
 - (c) What are various types of charts used for controlling quality ? Describe various uses of control charts.
4. Attempt *any two* parts of the following : (10x2=20)
- (a) How defects are identified and analyzed ? Describe various advantages and corrective measures to these.

- (b) Briefly describe the following :
- (i) maintainability
 - (ii) zero defect
- (c) What is quality circle ? Discuss benefits of quality circle.
5. Attempt *any two* parts of the following : (10x2=20)
- (a) Does the product and process design affect the product quality and cost ? Discuss.
 - (b) What benefits can be obtained by an organization through ISO : 9000 certification ? Briefly describe the changes made in ISO 9000 : 2000.
 - (c) Explain Taguchi's statement "the total quality of a manufactured product is measured by the total loss created by that product to society". Discuss a possible model for quantifying the society's loss from poor quality.

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