

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

PAPER ID : 0408

Roll No.

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**B.Tech.**

(SEM. VII) THEORY EXAMINATION 2011-12

**TOTAL QUALITY MANAGEMENT (TQM)**

Time : 3 Hours

Total Marks : 100

Note :- (i) Attempt all questions.

(ii) All questions carry equal marks.

(iii) Assume missing data if any.

1. Attempt any **two** parts of the following : (10×2=20)

(a) What is TQM ? Give a brief overview of quality control evolution.

(b) Briefly discuss the techniques for supplier selection and also mention the advantages for supplier selection.

(c) Explain various methods and techniques for manufacture, inspection and control of product.

2. Attempt any **two** parts of the following : (10×2=20)

(a) Advise the organization structure needed to deal with quality problems posed by multiple factory company. Write the duties of quality staff.

(b) Write activities involving costs of quality. Explain the economics of quality of conformance.

(c) How the operator error be classified into logical subspecies and explain organized approach for reduction of operator errors ?

3. Attempt any **two** parts of the following : **(10×2=20)**

(a) What is the basic function of a control chart ? Is it used to directly control product quality or process quality ? Explain.

(b) What is the purpose of process capability study ? Enumerate various measures of process capability and mention their relevance in different situations giving examples.

(c) Give a detail discussion about the construction and analysis of R charts.

4. Attempt any **two** parts of the following : **(10×2=20)**

(a) Write a short note on application of quality circle for quality improvement.

(b) What is meant by reliability ? What factors affect reliability and how ?

(c) What is MTBF ? How is it related to reliability ? Given a uniform failure rate for an item with a mean life of 15,000 hours. What is the probability that some unit of this item will survive for a required 1,000 hours of operation ?



5. Attempt any two parts of the following : (10×2=20)

(a) Discuss the quality loss function as defined by Taguchi.

How is it used in delivering a product with 'best' quality.

(b) Discuss the advantages of Just in Time manufacturing philosophy.

(c) Write a short note on ISO-9000 quality systems.