



RM-7855-R

B. E. IV (Sem. VIII) (Mech.) Examination

May / June - 2010

Total Quality Management
(Elective - II)

Time : 3 Hours]

[Total Marks : 100

Instruction :

(1)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="text" value="B. E. 4 (Sem. 8) (Mech.)"/>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="text" value="Elective - 2 - Total Quality Management"/>	<input type="text"/>
Subject Code No. : <input type="text" value="7"/> <input type="text" value="8"/> <input type="text" value="5"/> <input type="text" value="5"/>	Section No. (1, 2,.....) : <input type="text" value="1&2"/>
	Student's Signature

- (2) Attempt all the questions.
- (3) Answer to the **two** sections must be written in the **separate** answer books.
- (4) Assume the necessary data giving justification
- (5) Figures to the **right** indicates full marks.

SECTION - I

- 1 Attempt any **three** : 18
 - (i) What is quality? Give the various definitions of quality i.e. Transcendent, Product based, User based, Manufacturing based and Value based.
 - (ii) Define quality control, statistical quality control and quality assurance.
 - (iii) Define the TQM. Explain the concept of internal and external customer with respect to TOM.
 - (iv) Write a brief note on drivers of TQM.

- 2 Attempt any **two** : 16
 - (i) (a) Distinguish between PUSH v/s PULL manufacturing.
 - (b) The process of making component P for product Q involves 8 work stations. The cycle time is 6 minutes per item for each work stations. What will be the impact of reducing lot size from 10 units to 6 units on process flow through time and work in process inventory level?

- (ii) Enumerate ten mantras for quality improvement by Juran.
- (iii) Write a brief note on TQM system model.

3 Attempt any **two** : **16**

- (i) Define JIT. Discuss the fundamentals of JIT.
- (ii) By considering the bank as a service industry, depict various quality measures which can be use to evaluate the performance considering the quality as a service.
- (iii) A decision matrix for evaluating three suppliers S_1, S_2 and S_3 based on five different criteria C_1 to C_5 is given below. The weightages given to the five criteria are 0.35, 0.4, 0.3, 0.2 and 0.1. Find the weighted decision matrix and give your recommendations for preferences given to the suppliers :

Suppliers	C_1	C_2	C_3	C_4	C_5
S_1	4	0	3	92	96
S_2	8	5	4	92	91
S_3	13	8	0	94	95

SECTION - II

4 Attempt any **three** : **18**

- (i) Enlist the steps for implementation of ISO 9000 quality system. Explain any one of them.
- (ii) Discuss the advantages and limitations of ISO 9000 quality system implementation.
- (iii) What are the management responsibilities related with ISO: 9000-2000.
- (iv) Write a brief note on "ISO 14001 an environment management system"

5 Attempt any **two** : **16**

- (i) Discuss the concept of an icebery with respect to various cost associated with quality and give way to reduce it.
- (ii) Explain the organization structure for TQM.
- (iii) Explain principles of TQM.

6 Attempt any **two**. **16**

- (i) Define QFD. Write a short note on house of quality product planning matrix.
- (ii) Explain in brief seven new quality improvement techniques.
- (iii) What is a Pareto diagram? Explain construction steps of a pareto diagram.