



Register Number: .....

**B.E DEGREE EXAMINATIONS: NOV/DEC 2014**

(Regulation 2009)

Seventh Semester

**GSS103: TOTAL QUALITY MANAGEMENT**

(Common to MEC / AUE)

(Use of Statistical Tables is permitted)

**Time: Three Hours**

**Maximum Marks: 100**

**Answer all the Questions:-**

**PART A (10 x 1 = 10 Marks)**

1. Which one of the following is not part of TQM
  - a) Keizen
  - b) 5S
  - c) AICTE
  - d)  $6\sigma$
  
2. “A great leader is one who is not only good in creating vision, creating the big picture, but also ensuring that he goes in to the nitty-gritty, into the details of making sure that his vision is actually translated into reality through excellence of execution. In other words, great leaders have great vision, great imagination, great ideas, but they also implement these ideas through hard work, commitment and flawless execution. In doing so, they motivate thousands of people” according to
  - a) Ramakrishna Bajaj
  - b) Nagavara Ramarao Narayana murthuy
  - c) Shri Hari Shankar Singhanian
  - d) Azim Premji
  
3. The year in which American Customer Satisfaction Index(ASCI) was established as a joint project between the University of Michigan and the American Society for Quality
  - a) 1994
  - b) 1996
  - c) 2002
  - d) 2006
  
4. “Customer is the most important person in our premises” said by
  - a) Jawaharlal Nehru
  - b) Lal Bahadur Shastri
  - c) Vallabhbhai Patel
  - d) Mahatma Gandhi

5. The Malcolm Baldrige National Quality Award (MBNQA), an annual award to recognize US Organizations for performance excellence was created by Public Law 100-107 on which day and year.
  - a) April 15<sup>th</sup> 1980
  - b) June 16<sup>th</sup> 1984
  - c) August 20<sup>th</sup> 1987
  - d) November 26<sup>th</sup> 1989
6. The ordered set of numbers 3,4,5,6,8 and 8 has a median of
  - a) 5.5
  - b) 6
  - c) 5
  - d) 7
7. If the standard deviation “ $\sigma$ ” is zero and there is no curve,
  - a) All the values are identical to mode
  - b) All the values are identical to mean
  - c) All the values are identical to median
  - d) All the values are zero
8. A negative “ $C_{pk}$ ” value indicates that average is
  - a) Conforms to specification
  - b) Not capable
  - c) Outside specification
  - d) Does not conform to specification
9. Total Productive Maintenance (TPM) is an extension of
  - a) Stratification Analysis
  - b) Control charts
  - c) Matrix diagram
  - d) Total Quality Management
10. The ISO quality System is an excellent first step towards TQM registered as on December 31, 2001 which has registrations
  - a) Over 5, 10,000 organizations in 158 countries.
  - b) Over 5, 68,000 organizations in 158 countries.
  - c) Over 6, 15,000 organizations in 158 countries.
  - d) Over 7, 05,000 organizations in 158 countries.

**PART B (10 x 2 = 20 Marks)**

11. Name all the Quality Gurus of Total Quality Management.
12. Define PDCA.
13. Which are the best eight points to remember for making customer questionnaire more useful?
14. Choose the concepts to achieve a motivated work force for creating motivational environment.
15. Define the concept of six sigma.
16. Illustrate with tabulation, the New Seven Management tools with their purpose.
17. What are the objectives of Total Productive Maintenance (TPM)?
18. Classify the types of Benchmarking based on the object to be benchmarked.
19. What are the steps necessary to implement a Quality Management System?

20. Recall the five objectives of Internal Auditing done in ISO 9000 standard.

**PART C (5 x 14 = 70 Marks)**

21. a) Explain all the concepts of Quality Improvement framed by Philip Bayard Crosby.

**(OR)**

b) (i) Which are the seven habits of highly effective people given by Stephen R.Covey? Explain all in detail. (6)

(ii) List the characteristics of quality leaders in management. (8)

22. a) (i) Show the customer satisfaction organizational diagram. (2)

(ii) Who is a customer? Outline customer perceptions of quality with detailed explanation. (8)

(iii) Name all the various customer feedback collecting tools. (4)

**(OR)**

b) (i) Explain the stages of team development. (4)

(ii) What are the ten common team problems? (4)

(iii) List the common barriers to team progress. (6)

23. a) (i) Explain the seven tools of quality. (7)

(ii) Discuss the application of statistical fundamentals in Quality control. (7)

**(OR)**

b) (i) Define median and mode. (4)

(ii) The following Table (I) shows the scores of two cricket batsmen Sachin Ramesh Tendulkar and Rahul Dravid in a cricket match series. Who are the better scorer and who more consistent batsman is? (10)

TABLE-(I)

Sachin	12	115	6	73	7	19	119	36	84	29
Dravid	47	12	16	42	4	51	37	48	13	0

24. a) (i) Define process capability and identify the purposes of this analysis. (4)

- (ii) The CMC Hospital has completed a quality improvement project on the time to admit a patient using  $\bar{X}$  and  $R$  charts. They now wish to monitor the activity using mean and range charts. Determine the Central Line and Control Limits with latest data in minutes as given in the following Table (II). (10)

TABLE (II)

Subgroup no.	Observation			Subgroup no.	Observation		
	$X_1$	$X_2$	$X_3$		$X_1$	$X_2$	$X_3$
01	6.0	5.8	3.1	13	6.1	6.9	7.4
02	5.2	6.4	6.9	14	6.2	5.2	6.8
03	5.5	5.8	5.2	15	4.9	6.6	6.6
04	5.0	5.7	6.5	16	7.0	6.4	6.1
05	6.7	6.5	5.5	17	5.4	6.5	6.7
06	5.8	5.2	5.0	18	6.6	7.0	6.8
07	5.6	5.1	5.2	19	4.7	6.2	7.1
08	6.0	5.8	6.0	20	6.7	5.4	6.7
09	5.5	4.9	5.7	21	6.8	6.5	5.2
10	4.3	6.4	6.3	22	5.9	6.4	6.0
11	6.2	6.9	5.0	23	6.7	6.3	4.6
12	6.7	7.1	6.2	24	7.4	6.8	6.3

(OR)

- b) (i) Illustrate the twelve steps in benchmarking process proposed by Robert C.Camp. (7)  
(ii) Show the basic structure of House of Quality Function Deployment with an explanation. (7)

25. a) Categorize the elements or clauses of ISO 9000 Quality Management systems.

(OR)

- b) (i) Why do we need ISO 14000 standards? (3)  
(ii) How do you divide ISO 14000 standards? (3)  
(iii) Summarize the benefits of ISO 14000 standards. (8)

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