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BME-007

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BACHELOR OF TECHNOLOGY IN MECHANICAL ENGINEERING (COMPUTER INTEGRATED MANUFACTURING)
B.Tech. (AEROSPACE ENGINEERING)

Term-End Examination

June, 2012

BME-007 : QUALITY ENGINEERING

Time : 3 hours *Maximum Marks : 70*

Note : *Attempt **any ten** questions. All questions carry **equal marks**. Use of scientific non-programmable calculator is allowed.*

1. (a) What is quality audit ? Describe the various types of quality audit. 4

   (b) Discuss the effects of quality on supplier economy. 3

2. Discuss the seven most commonly used quality tools in conjunction with TQM. 7

3. (a) What are the guidelines to be followed while implementing TQM ? 3

   (b) Write short notes on ISO 14000. 4

4. (a) Differentiate between single sampling plan and double sampling plan. 4

(b) Explain briefly about average outgoing quality. 3

5. The following table gives the number of surface imperfections on sheets of photographic film manufactured by a company. Plot the control chart for C and comment on the process. 7

Film No	1	2	3	4	5	6	7	8
Number of Imperfections	10	15	12	9	8	7	10	12

Film No	9	10	11	12	13	14	15
Number of Imperfections	15	13	11	12	9	7	12

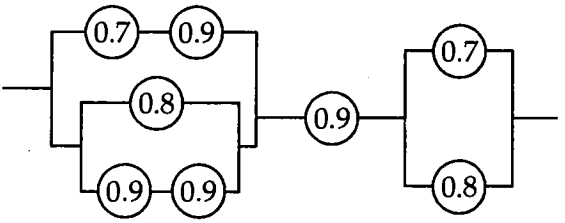
6. (a) Compare Deming and Taguchi approaches towards quality improvement. 4

(b) What are the steps that Taguchi suggests to be taken in carrying out experimental studies ? 3

7. (a) What are the seven management and planning tools utilized by QFD ? 3½

(b) Discuss the elements of FMECA. 3½

8. (a) Determine the reliability of the following system. 4



(b) Explain briefly about dispersion analysis. 3

9. (a) Discuss the general stages in the application of statistical process control. 5

(b) What is availability ? How it is determined? 4

10. (a) Explain the procedure of selection of a supplier by a company. 4

(b) Discuss the importance of cost of quality. 3

11. (a) Describe the three aspects of totality of management system. 3

(b) Discuss the cost of poor quality suggested by Juran. 4

12. (a) Discuss the contributions of Philip Crosby in TQM. 3

(b) Explain the factors behind the success of Japanese industries. 4