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BME-007

B.Tech. MECHANICAL ENGINEERING (COMPUTER INTEGRATED MANUFACTURING)/ B.Tech. AEROSPACE ENGINEERING (BTAE)

Term-End Examination, 2019

BME-007 : QUALITY ENGINEERING

Time : 3 Hours **Maximum Marks : 70**

Note : Answer **any seven** questions. All questions carry equal marks. Use of scientific calculator is allowed. Assume suitable data if required.

1. What is meant by ISO-9000 ? What are the benefits of ISO-9000 in today's global environment ? [10]

2. What are the common points in Juran's, Crosby's and Feigenbanm's philosophies ? Discuss Ishikawa's approach towards TQM. [5+5=10]

3. Explain in detail the procedure for constructing control charts for attributes. [10]

4. What is quality control ? Explain the need for controlling the quality of goods and services, with suitable examples. [10]

5. What is design of Experiments ? Discuss in detail the Taguchi's experimental design method. [4+6=10]

6. Define and explain the terms MTBF and MTTR. A system has mean time between failure of 120 hours and the inherent availability of 0.90. What is the mean time to repair ? [5+5=10]

7. Explain the steps used in hypothesis testing. Discuss the statistical errors in detail. [5+5=10]

8. Write a detailed note on Six-Sigma methodology (DMAIC) of quality management. [10]

9. Why are safety procedures becoming requirements of good management ? What steps are to be taken for safety and good health of workers under the guidelines of OSHA ? What benefits are expected from occupational safety policy ? [10]

10. Write short notes on any two of the following : [2×5=10]

(a) Zero defects and its significance

(b) Kaizen philosophy

(c) FMECA

(d) Quality Circles.

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