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# 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** question. **All** questions carry **equal** marks. Use of Scientific Calculator is allowed. Assume suitable data if required.

1.  Describe the concept of TQM. Discuss the various approaches to achieve TQM.            [4+6=10]

2.  Distinguish between process FMEA and design FMEA. What are the benefits of FMEA ?        [6+4=10]

3.  Explain the concept of quality. Discuss the various types of quality costs. Describe the elements of cost of quality.

    [3+4+3=10]

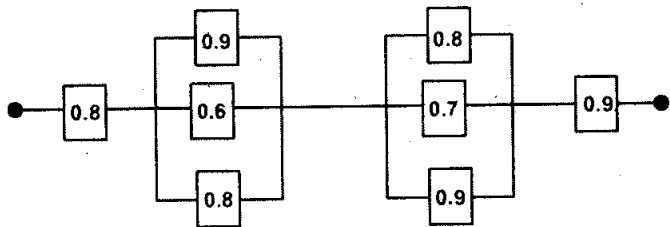4.  Compute the reliability of the system as shown in Figure-1 :                    [10]

**Figure-1**

5. Describe the concept of Quality Function Deployment ( QFD). List the merits and demerits of QFD. [5+5=10]

6. What is Quality Audit ? Name and describe the various types of quality audits. [10]

7. Define Customer. What are needs of Customer ? What are customer values and how do they affect company's performance ? [10]

8. Distinguish between Deming Prize and Baldrige Award. Why do the companies apply for these awards ? [10]

9. What are the seven basic tools of SQL ? Explain any five in detail. [10]

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

    (a)   Control Chart

(b)     Benchmarking

(c)     ISO 14000

(d)     Cause and effect diagram

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