Total No. of Questions : 8] *[Total No. of Printed Pages : 2*

Roll No .....

ME-703(D)-CBGS

B.Tech., VII Semester

Examination, December 2020

Choice Based Grading System (CBGS)

Reliability Engineering

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) Define the term reliability? Explain the reliability function.
   b) Describe the importance of reliability engineering. 7

2. a) Differentiate between reliability and quality. 7
   b) What do you mean by Reliability management explain in detail? 7

3. a) Gave Some examples of system failures explain any one in detail. 7
   b) Explain Bay's Theorem in detail. 7

4. a) Describe density functions for different types of discrete and continuous variables. 7
   b) What are time dependent failure models? 7

5. a) Differentiate between weibulldistribution , normal distribution and the lognormal distribution. 7
   b) Explain the term MTTF. Also derive it with respect to reliability and CDF. 7

6. a) What is MTBF? 7
   b) Draw and explain Bath tub Curve. 7

7. a) What are Time dependent reliability of components? 7
   b) Define Maintainability and availability and compare it with reliability. 7

8. a) What is inspection and repair availability model? Explain a case for it. 7
   b) Explain Monte Carlo Simulation. 7

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