Code: RA 9A10702

RA

B.Tech IV Year II Semester (R09) Regular Examinations, March/April 2013

RELIABILITY ENGINEERING

(Electronics and Instrumentation Engineering)

Time: 3 hours Max Marks: 70

Answer any FIVE questions

All questions carry equal marks

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1 (a) Explain probability density and distribution functions.

(b) Explain the condition under which Binomial distribution can be approximated to Poison's distribution.

2 Calculate the reliability of the system shown in the following figure1.

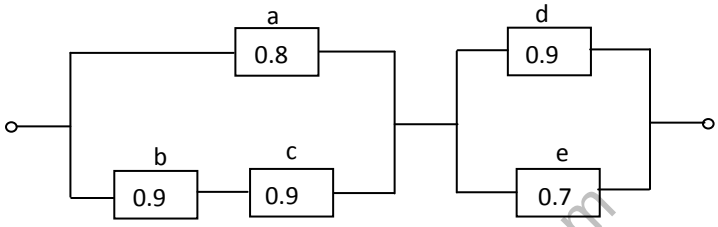

Figure:1

3 (a) Explain the terms: (i) MTTF (ii) MTTR (iii) MTBF

(b) With a neat sketch explain various regions of bath tub curve.

4 How to evaluate the limiting state probabilities for Markov processes?

5 Define reliability, maintainability and availability. Explain the relationship between them.

6 Explain about total productive maintenance (TPM).

7 Explain about the estimation of parameters for Weibull distribution.

8 What are various causes of failures? Explain using bath tub curve and remedial measures.

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