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COURSE CODE:18B1WEC732   MAX. MARKS:15

COURSE NAME: Design of Dependable Systems

COURSE CREDITS: 03   MAX. TIME: 1 Hr

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

Q.1   Describe the following questions in short.

a) What is Service Level Agreement (SLA)?

b) What is reliability?

c) What is mean time to failure (MTTF)?

d) What is career class communication?

e) How the guarantee and reliability are related with each other?

(1*5=5)

Q.2   a) Derive the expression of reliability $R(t) = \exp[-\int_0^t \lambda(t)dt]$

Where, λ is failure rate.   (3)

b) Determine the reliability and mean time to faire (MTTF) if the failure rate is given as $\lambda(t) = kt$ (2)

Q.3   (a) Three generators have been given, out of these two with 50 KW capacity and one with 100KW. Connect in parallel in such a way that the required capacity are (i) 100KW and (ii) 150KW

Draw the reliability block diagram. Also find the reliability if reliability of each generator is 0.9.

(3)

(b) Write a short note on service continuity and business continuity.   (2)