917A4_Statistics_2013

Item Text	Option Text 1	Option Text 2	Option Text 3	Option Text 4
If T is a lifetime random variable having exponential distribution with mean 12 then mean residual life of unit aged t is,	10t	12	1/12	1/(12+t)
For a lifetime random variable follow the Makeham family of lifetime distribution. Then,	hazard rate is always increasing	hazard rate is always constant	hazard rate is always decreasing	hazard rate is always 1
Let a system consist of only single component with structure function is 1-x. Then that component is,	Relevant	Irrelevant	Both a and b	none of the above
A lifetime distribution of a component follow an exponential distribution with hazard rate is 2.5. Then its PDF is,	0.4 exp(-0.4/t)	2.5 exp(-0.5 t)	2.5 exp(-2.5 t)	0.5 exp(-0.5 t)
Let survival function of brand new unit is same as that as survival function of unit aged t. Then the unit has,	ageing property	does not satisfy the Cauchy functional equation	the residual lifetime random variable is not iid	no-ageing property
The only continuous distribution which satisfies the Cauchy functional equation is,	exponential distribution	normal distribution	gamma distribution	log-normal distribution
Which of the following is not the characteristic of no-ageing property?	constant failure rate	constant equilibrium distribution function	exponential life distribution	constant mean residual life

917A4_Statistics_2013

Suppose r(t)=constant then the form of survival function is,	ln(-constant*t)	exp(constant* t)	exp(-constant*t)	exp(-constant/t)
Let survival function of a component is, exp(-2*t) then the expected complete life of a component is,	0.7	0.5	1	1.5
Let the hazard rate of a component is 4.78 then mean residual life function of a component is,	0.2092	0.2594	0.9524	4.78
A lifetime distribution belongs to IFRA class iff,	hazard rate is incrasing function of t	hazard rate is decreasing function of t	hazard rate average function is decreasing	hazard rate average function is increasing
Identify the type of censoring: a lifetime study of n identical units is discontinued at a predetermined time	time censoring	order censoring	interval censoring	right censoring
The structure function of a series system of 3 components is,	max(x1, x2, x3)	min(x1, x2, x3)	x1*x2*(1-x3)	(1-x1)*(1-x2)*(1-x3)
The minimal cut sets for series system of 2 components are,	1	n	2	0
The minimal cut sets for parallel system of n components are,	0	1	n	n-1
The number of components present in the system is called as,	structure function	order of the system	state of the system	series system

917A4_Statistics_2013

Each component in the system and its indicator function always constitute a,	relevant vector	critical vector	coherent structure	module
Minimal cut set of a coherent system is always,	minimal cut set of the dual	minimal path set of the dual	path set of the dual	critical set of the dual
The dual of a coherent structure is always,	need not be coherent structure	may not exist	coherent structure	irrelevant component structure
The interrelation between P.D.F. and survival function is,				
The interrelation between survival function and cumulative hazard rate is,				
In type 1 censoring the number of failures is always,	binary variable	random variable	not a random variable	constant
In type 2 censoring the time interval over which the observations are taken are always,	random variable	binary variable	constant	fixed