



SOLUTION_WORKSHEET-7

SUBJECT - STATISTICS

Term : 1st

Topic – Random variable and Expectation

Class: XII

Full Marks: 15

Date:15.05.2020

Q1.		Select the correct alternative of the following questions.					
	i)	The values of a random variable are always positive real numbers.					
	a) p	positive real nu	mbers.	b) negative real numbers.		s.	
	c) zero		d) none of these				
	ii)	Expectation of	a negative rando	om variable is			
	a)	positive	b) negative	c)zero	d)) none of the	ese	
	iii)) Standard deviation of a negative random variable is					
	a)	positive.	b) negative	c) zero	a)) none of the	se	
	iv) If expectation of a random variable is zero, each value of the random variable m					dom variable must be	
	a)	positive.	b) negative	c) zero	a)) none of the	ese	
	v) If all values of a random variable are equal, then the variance will also be equal					ll also be equal to	
	a)	that value.	b) one	c) zero	a)) none of the	se	
	vi)	<i>i</i>) All odd-ordered central moments are zero for a distribution which is					
	 a) Positively skewed b) negatively skewed c)symmetric d) none of these vii) Expectation of a discrete random variable assuming integral values must be 						
	D)	Integer	b) non integer	c) rational nun	nder d) none	of these	
	viii) For a random variable X, the first order central moment is always						
	a)	0	b) -1	c) 1	d) none of these		
	ix) For a symmetrically distributed random variable X, $P(X \le mode) * P(X \ge mode)$, *						
	a)	+	b) =	c) ≠	d) none of these	2	

 x) If the observations of a random variable X be the first n natural numbers with same probability, the expectation of the random variable is

a)	n	b) n+1	c) $\frac{n+1}{2}$	d) none of these				
xi)	If X and Y be two independent random variables with variances are 9 and 16 respectively,							
	then, $V(X-Y)$ is							
a)	0	b) 5	c) 4	d) none of these				
xii) If $V(X) = 4$, then $V(3-5X)$ is								
a)	100	b) 125	c) 0	d) none of these				
xiii) A random variable X has two values 0 and 1, with $P(x=1) = \frac{1}{3}$, then E(X) is								
a)	$\frac{1}{3}$	b) $\frac{2}{3}$	c) 1	d) none of these				
xiv) The variance of a standard random variable is								
a)	0	b)1	c) 2	d)none of these				
xv)	v) The mean of a standard random variable is							
a)	0	b)1	c) 2	d)none of these				

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