ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

SOLUTION OF WORKSHEET-9

SUBJECT – STATISTICS

Term : 1st

Topic – BINOMIAL DISTRIBUTION **Class: XII**

Full Marks: 15 **Date:09.06.2020**

Q1. Select the correct alternative of the following questions.

(i) Binomial distribution is used for the random variable which is
a) **discrete** b) continuous c) both d) none of these
b)

(ii) The trials in binomial distribution are
a) finite b) countable **c)countably finite** d) none of these

(iii) The trials in binomial distribution are
a) independent b) dependent c) lin independent d) none of these

(iv) In each trial of binomial distribution , no of outcomes is
a) 1 **b) 2** c) 3 d) none of these

(v) When an unbiased coin is tossed 5 times the probability of getting atmost one head is
a) $\frac{3}{16}$ b) $\frac{5}{16}$ c) 0 d) none of these

(vi) Th range of binomial distribution Bin(n , p) is
a) 1(1) n b) 1(2)n **c) 0(1) n** d) none of these

(vii) For a binomial distribution (n, p), cov(x, n-x) is
a) V(X) **b) –V(X)** c) 0 d) none of these

(viii) In a Bin (n , $\frac{1}{2}$), P (X = 0 ∩ X = n)

a) $\frac{1}{2}$ b) $\frac{1}{2^n}$ **c)** $\mathbf{\frac{1}{2^{2n}}}$ d) none of these

(ix) X~ $Bin(8,p) and\ Y \sim Bin\ (8,q)$ independently, then correlation coefficient between Y and X is

a) 0 b) 0.5 c) -0.5 d) none of these

(x) X~ $Bin(n,p), P(X \leq a)$ is

a) left continuous **b) right continuous** c)continuous d) none of these

(xi) If for a random variable X, E(X) =0 then all the observations are

a) Positine b) negative **c)a &b both** d) n0ne of these

(xii) If a random variable realises infinite values, then expectation of that random variable must be

a) infinite b) negative c) zero **d)) none of these**

(xiii) If there are n values of a random variable and each with probability $\frac{1}{n}$, then E(X)=

a) $\mathbf{\frac{n+1}{2}}$**.** b) $\frac{n}{2}$ c) zero d)) none of these

(xiv) For a random variable X, E($X - E(X)$) =

a) **0** b) 1 c) E(X) d) none of these

(xv) For a radom variable X, $(E(X^{-1})^{-1}$denotes

a) Variance **b) harmonic mean** c) median d) none of these

- **Prepared by**
  Sanjay Bhattacharya