ST. LAWRENCE HIGH SCHOOL
A JESUIT CHRISTIAN MINORITY INSTITUTION

WORKSHEET-11

SUBJECT – STATISTICS

Term : 1st

Topic – BINOMIAL DISTRIBUTION   **Class: XII**

Full Marks: 15   **Date:11.06.2020**

Q1.   Select the correct alternative of the following questions.

(i)   The expectation in Binomial distribution (n, $\frac{1}{3}$) is

a) n$\frac{1}{3}$ b) n(1- p)   c) p(1-p)   d) none of these

(ii)   The variance in Binomial distribution (5, $\frac{1}{2}$) is

b) 1.20   b) 10.25   c) 2.25   d) none of these

(iii)   For a binomial distribution if mean is equal to its variance, then p is equal to
a) 0   b) 1   c) either 0 or 1   d) none of th

(iv)   The binomial distribution(n+2, $\frac{p}{2}$) is symmetric if and only if
a) p = 1   b) p > 1   c) p< 1   d) none of these

(v)   The binomial distribution(n+3, p) is positivey skewed if and only if
a) p =$\frac{1}{2}$ b) p > $\frac{1}{2}$ c) p< $\frac{1}{2}$ d) none of these

(vi)   The binomial distribution(n+3, p) is negatively skewed if and only if
a) p =$\frac{1}{2}$ b) p > $\frac{1}{2}$ c) p< $\frac{1}{2}$ d) none of these

(vii)   The binomial distribution(n+3, p) attains maximum variance at

a) $p = \frac{1}{2}$ b) $p > \frac{1}{2}$ c) $p < \frac{1}{2}$ d) none of these

(viii)   The binomial distribution(n, p) the minimum variance is

a) $p = \frac{1}{2}$ b) $p = \frac{n}{4}$ c) $p < \frac{1}{2}$ d) none of these

(ix) $X \sim Bin(8, 0.5)$ then first order factorial moment is equal to
a) 4   b) 6   c) 8   d) none of these

(x) $X \sim Bin(8, 0.5), P(X \leq 1)$ is equal to
a) $\frac{8}{512}$ b) $\frac{9}{512}$ c) $\frac{9}{256}$ d) none of these

(xi)   The binomial distribution attains maximum variance when it is
a) Positive skewed   b) negative skewed   c) symmetric   d) none of these

(xii)   The third order central moment of Bin ($9, \frac{1}{3}$) is

a) $\frac{2}{3}$ b) $\frac{1}{3}$ c) 0   d)) none of these

(xiii)   The fifth order central moment of Bin ($n, \frac{1}{2}$) is

a)   0   b) n   c) $\frac{n}{2}$ d)) none of these

(xiv)   the binomial distribution (n, p) is leptokurtic when

a) $p = \frac{1}{2}$ b) $p > \frac{1}{2}$ c) $p < \frac{1}{2}$ d) none of these

(xiv)   A person tosses an unbiased coin rtepeatedly. Find the probability that in 4th throw he
gets the first head
a) $\frac{1}{16}$ b) $\frac{3}{16}$ c) $\frac{1}{4}$ d) none of these

Prepared by

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