



SOLUTION OF WORKSHEET-29

SUBJECT - STATISTICS

Term : Final

Topic – BINOMIAL DISTRIBUTION

Full Marks: 15

Date:16.01.2021

Class: XII

Q1. Select the correct alternative of the following questions.

| (i) | The mean deviation in Binomial distribution $(7, \frac{1}{6})$ is | | | | | | |
|--------|--|--|----------------|------------------------------------|--------------------|----------------------------------|--|
| | a) 0.39 | b) 0.93 | c) 0.49 | 0 | d) non | e of these | |
| (ii) | The maximum b) 1.20 | n variance in B b) 1.2 | inomial o 5 | distribution (s c) 2.25 | 5, p) is d) non | e of these | |
| (iii) | For a binomia a) 0 | ll distribution i b) 1 | f mean is | s equal to its v c) either 0 or | ariance, 1 | then p is equal to d) none of th | |
| (iv) | The binomial | distribution $(n+2, \frac{p}{2})$ is mesokurtic if and only if | | | | | |
| | a) p = 1 | b) p > 1 | Z | c) p< 1 | | d) none of these | |
| (v) | The binomial distribution $(n+3, p)$ is leptokurtic if and only if | | | | | | |
| | a) $p = \frac{1}{2}$ | b) $p > \frac{1}{2}$ | | c) p < $\frac{1}{2}$ | | d) none of these | |
| (vi) | All odd-ordered central moments are zero for a distribution which is | | | | | | |
| | a) Positively | skewed b) neg | atively sk | ewed c)sym | metric | d) none of these | |
| (vii) | Expectation of a discrete random variable assuming integral values must be | | | | | | |
| | a) Integer | b) non | integer | c) rational nu | mber | d) none of these | |
| | | | | | | | |
| (viii) | For a random variable X, the first order central moment is always | | | | | | |
| | a) 0 | b) -1 | c) 1 | d) non | e of these | 2 | |

| (ix) | For a symmetrically distributed random variable X, $(X \le mode) * P(X \ge mode)$ | | | | | | |
|--------|--|----------------------------|-----------------------------|------------------|--|--|--|
| | a) + b) | = c) ≠ | d) none of the | ese | | | |
| | | | | | | | |
| (x) | If a random variable X defines waiting time in a bus stand, then X follows | | | | | | |
| | a) binomial | b) Poisson | c) Uniform | d) none of these | | | |
| (xi) | If $X \sim Poisson(2)$, then P(X=3) is | | | | | | |
| | a) 2 <i>e</i> ⁻² | b) $\frac{4}{3}e^{2}$ | c) 2 <i>e</i> ⁻¹ | d) none of these | | | |
| (xii) | If $X \sim Poisson(1)$, then P(X=0) is | | | | | | |
| | a) $2e^{-2}$ | b) 2 <i>e</i> ² | c) <i>e</i> ⁻¹ | d) none of these | | | |
| (xiii) | Standard deviation of a Poisson distribution is 2. Then the value of β_2 is | | | | | | |
| | a) 0.25 | b) 0.75 | c) 0.57 | d) none of these | | | |
| (xiv) | The probability distribution which has mean is greater than its standard deviation i | | | | | | |
| | a) binomial | b) Poisson | c) Uniform | d) none of these | | | |
| (xv) | The mode of uniform distribution is represented by | | | | | | |
| | a) all the observa | tions | b) none of the observatyion | | | | |
| | c) few observations | 5 | d) none of these | | | | |

(ix)

Prepared by

Sanjay Bhattacharya