

B. COM
Third Semester
BUSINESS STATISTICS
(BCM - 301)

Duration: 20 minutes

Marks – 20

(PART A - Objective Type)

I. Choose the correct answer:

1×15=15

1. Mode is the value that has the greatest _____.
a. frequency b. cumulative frequency
c. percentile d. none of these
2. Histogram is a bar diagram which represents a frequency distribution with _____ classes.
a. discrete b. continuous
c. arbitrary d. none of these
3. The sum of deviations of the values from their mean is always _____.
a. one b. zero
c. least d. none of these
4. Standard deviation is independent of _____ but not of _____.
a. scale, origin b. origin, scale
c. unit, origin d. none of these
5. For a moderately skewed distribution $\text{Mode} = 3 \text{ Median} - \text{_____}$.
a. 3Mean b. 2Mean
c. 2 Mode d. none of these
6. The sum of squares of deviations is least when measured from
a. mean b. median
c. mode d. none of these
7. In a frequency curve when $\text{mean} > \text{median} > \text{mode}$ the curve is said to be _____ curve.
a. Positively skewed b. Negatively skewed
c. Summetrical d. None of these
8. If A and B are mutually exclusive events then $P(A \cup B) = ?$
a. $P(A) + P(B)$ b. $P(A) - P(B)$
c. $P(A) + P(B) - P(AB)$ d. None of these
9. If A & B are two events associated to a random experiment such that $A \subset B$ then
a. $P(A) \leq P(B)$ b. $P(A) \geq P(B)$
c. $P(A) = P(B)$ d. None of these

10. $P(A \cap B)$ is known as the probability of occurrence of
- A only
 - B only
 - Both A & B
 - None of these
11. If A & B are two independent events then $P(AB) =$ _____
- $P(A)$
 - $P(A) + P(B)$
 - $P(A).P(B)$
 - None of these
12. If E and F are two events such that $P(E) = 1/4$, $P(F) = 1/2$ and $P(E \text{ and } F) = 1/8$ then $P(E \text{ or } F) = ?$
- $2/8$
 - $3/8$
 - $5/8$
 - None of these
13. If A and B are independent then $P(A/B) = ?$
- A
 - B
 - AB
 - None of these
14. A bag contains 3 red, 2 white and 4 black balls. What is the probability of drawing 2 black balls?
- $1/6$
 - $1/9$
 - 0
 - None of these
15. For Binomial Distribution mean and variance are _____ & _____ respectively.
- np & pq
 - pq & npq
 - np & npq
 - None of these

II. State true or false:

1×5=5

- The coefficient of correlation is independent of both change of scale and origin.
- The lines of the regression are parallel if $r = 0$.
- Fishers index number satisfies both time reversal test and factor reversal test.
- Seasonal variation is the general long term movement in the time series value of the variable over a fairly long period.
- Mean and variance of poisson distribution are equal.
