Voc(S-III) — BCA
(GE – 3)

2023

Time : 3 hours

Full Marks : 70

Pass Marks : 32

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

*Answer from **all** the Groups as directed.*

Group – A

(Objective Type Questions)

1. [A] Fill in the blanks of the following : 2×5 = 10

(a) Poisson distribution is a limiting case of _____ distribution.

(b) The probability of happening of an event lies between _____.

(c) The mean of first 'n' natural numbers (1, 2, ... n) is _____.

(Turn over)

(d) The median value of 1, 2, 2, 3, 5, 6, 5 _____.

(e) In a symmetrical distribution, mean, median and mode are _____.

[B] Choose the correct answer from the following alternative : 2×5 = 10

(a) The variance of x is 3. The varience of x + 3 will be :

(i) 3 (ii) 6

(iii) 9 (iv) $\sqrt{3}$

(b) If X and Y are random variable, then :

(i) $E(X + Y) = E(X) + E(Y)$

(ii) $E(X + Y) = E(X) \cdot E(Y)$

(iii) $E(X + Y) = E(X) - E(Y)$

(iv) None of these

(c) In a distribution, Mean = Median = Mode, then it will be :

(i) Poisson distribution

(ii) Binomial distribution

(iii) Normal distribution

(iv) None of these

(d) All possible outcomes of a random experiment is known as :

(i) Event

(ii) Primary event

(iii) Sample space

(iv) None of these

(e) bxy. byx is equal to :

(i) r (ii) $\sqrt{r}$

(iii) r^2 (iv) None of these

Group – B

(Short-answer Type Questions)

Answer any **four** questions of the following : 5×4 = 20

2. Define measure of Dispersion of the data and its types with examples.

3. What do you mean by Kurtosis ?

4. Discuss the properties of Normal Distribution.

5. Find the moment generating function of Poisson Distribution.

6. Discuss various scopes of statistics with examples.

7. What are uses of Regression Analysis ?

Group – C

(Long-answer Type Questions)

Answer any **three** questions of the following :

10×3 = 30

8. Discuss the Binomial Distribution. Obtain its M.G.F. Mean and Variance.

9. What do you mean by Raw and Central Moments ? Discuss first four Central and Raw Moments.

10. Define Correlation Coefficient and its types with examples.

11. What do you mean by moment generating function and its uses ?

12. Obtain Mean and Variance of first 'n' natural number (1, 2, 3, ... n).