

## 18015(CV-III)

### B.C.A. Examination, Dec.-2021

#### ELEMENTS OF STATISTICS

(BCA-305)

Time : 1½ Hours ] [Maximum Marks : 75

**Note :** Attempt questions from **all** sections as per instructions.

#### Section-A

##### (Very Short Answer Questions)

**Note :** Attempt any **two** questions. Each question carries 7.5 marks. Very Short Answer is required not exceeding 75 words.  $2 \times 7.5 = 15$

1. Define Discrete and continuous variables.
2. Discuss in brief geometric mean along with its merits and demerits.
3. Define partition values? What purpose do partition values serve?

**P.T.O.**

4. State addition theorem of probability for three events.
5. Distinguish between defects and defectives.

#### Section-B

##### (Short Answer Questions)

**Note :** Answer any **one** question out of the following three questions. Each question carry 15 marks. Short answer is required not exceeding 200 words.  $1 \times 15 = 15$

6. What is statistical average or central tendency? Discuss the uses of all measure of central tendency.
7. What is dispersion/Variability? Explain various methods of measuring dispersion along with their merits and demerits?
8. Define combinations and permutations. How many baseball teams are possible of nine members among twelve boys, without regard to the position played by each member?

#### Section-C

##### (Detailed Answer Questions)

**Note :** Attempt any **two** questions out of

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the following five questions. Each question carry 22.5 marks. Answer is required in detail.  $2 \times 22.5 = 45$

9. Find the mean, median and mode wage of the following distribution.

Wages (in Rs.)	No. of labourers
20-30	3
30-40	5
40-50	20
50-60	10
60-70	5

10. A consumer affairs agency wants to check the average weight and standard deviation in weight of a new product on the Market. The weights (in grams) of these items are as follows:

Class limits	Frequency
74-77	3
77-80	6
80-83	9
83-86	3
86-89	4

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P.T.O.

11. (i) Define Mutually exclusive events and Independent events.  
(ii) From a group of 3 Indians, 4 Pakistanis, and 5 Americans a subcommittee of four people is selected at random. Find the probability that the sub-committee will consist of  
(a) 2 Indians and 2 Pakistanis  
(b) 1 Indian, 1 Pakistani and 2 Americans
12. (i) Define Classical Definition of Probability? What are its limitations?  
(ii) A can hit a target 3 times in 5 shots, B 2 times in 5 shots, and C 3 times in 4 shots. They fire a volley. What is the probability of hitting 2 shots?
13. Distinguish between process control and product control. Explain the construction and operation of control chart for number of defective.

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