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BC–2875

B. C. A. (Third Semester)

EXAMINATION, 2020

ELEMENTS OF STATISTICS

Time : Three Hours

Maximum Marks : 75

Note : Attempt questions from both Sections as directed.

Section—A

(Short Answer Type Questions)

Note : Attempt any *ten* questions. Each question carries 3 marks. 10×3=30

1. Define Permutations. — (2)
2. Define population with an example. — (1)
3. What do you understand by a frequency distribution ? — (1)

P. T. O.

4. What do you understand by Central tendency of data ?

5. Define arithmetic mean of a frequency distribution.

6. Calculate geometric mean of the observations :

5, 5, 5, 5, 5, 5

7. What do you understand by Dispersion ?

8. Calculate standard deviation of the observations :

7, 7, 7, 7, 7

9. Define range of a set of observations.

10. How many two letter word can be made from the word 'JHANSI' ?

11. Define sample space with example.

12. Define mutually exclusive events.

13. Define conditional probability.

14. What do you understand by Statistical Quality Control ?

15. Explain about process and product control.

Section—B

(Long Answer Type Questions)

Note : Attempt any *three* questions. Each question carries 15 marks. 3×15=45

1. Calculate mode for the given frequency distribution :

Class Interval	Frequency (f)
0—5	7
5—10	12
10—15	16
15—20	19
20—25	13
25—30	6
30—35	3

2. Calculate coefficient of variation for the given frequency distribution :

Class Interval	Frequency (f)
0—10	4
10—20	7
20—30	11
30—40	14
40—50	9
50—60	6
60—70	3

3. (a) Calculate how many three-digit numbers can be framed from the number 3754. (6)

(b) Three coins are thrown together. Find the probability that the result give at least two heads. (6)

4. Two dice are thrown together. Then obtain the probability that the sum of the numbers occurred on both the dices is either 9 or 11. (5)

5. Explain in brief about appropriate chart for 'number for defectives' with control limits.