7502

BOARD DIPLOMA EXAMINATION, (C-20)

OCTOBER/NOVEMBER—2023

DCCP – FOURTH SEMESTER EXAMINATION

QUANTITATIVE TECHNIQUES—I

Time : 3 Hours]   [*Total Marks* : 80

PART—A   3×10=30

Instructions : (1) Answer **all** questions.

(2) Each question carries **three** marks.

(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. State the importance of Statistics.

2. List out the sources of secondary data

3. Represent the following data in a suitable graph :

Cricketer name	A	B	C	D	E
Runs	124	86	62	38	135

4. State the uses of median.

5. Calculate mode for the following data :

   4, 6, 8, 12, 4, 16, 12, 18, 12

6. List out the various measures of dispersion.

7. Calculate the coefficient of range from the following data :

   5, 10, 15, 20, 25, 30, 35, 40

8. Find out the Quartile Deviation from the following data :

   17, 20, 25, 33, 35, 45, 55

9. From the following values, calculate coefficient of skewness :

Q3 = 26, Q1 = 13.5, Median = 19.6

10. If AM = 8, Standard Deviation = 2.892, find co-efficient of variation.

<div align="center">

PART—B   8×5=40

</div>

Instructions :   (1) Answer **all** questions.

                (2) Each question carries **eight** marks.

                (3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. *(a)* Define statistics. Explain the functions of statistics.

<div align="center">

(OR)

</div>

(b) Find A.M. of the following :

Marks	10-20	20-30	30-40	40-50	50-60	60-70
No. of Students	31	42	26	35	48	18

12. *(a)* Calculate Median for the following data :

Class Interval	0-5	5-10	10-15	15-20	20-25	25-30	30-35
Frequency	6	12	15	20	18	14	15

<div align="center">

(OR)

</div>

(b) Calculate Mode from the following data :

Size of the item	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Frequency	7	9	10	6	19	10	12	7

13. *(a)* Calculate Geometric Mean from the following data :

Marks	0-10	10-20	20-30	30-40	40-50
No. of Students	8	12	20	6	4

<div align="center">

(OR)

</div>

(b) Calculate Harmonic Mean from the following data :

Class interval	10-20	20-30	30-40	40-50	50-60
Frequency	4	6	10	7	3

14. *(a)* Calculate Quartile Deviation from the following frequency distribution :

Marks	0-20	20-40	40-60	60-80	80-100	100-120	120-140
No. of Students	9	16	33	36	19	15	12

(OR)

(b) Calculate Mean Deviation and its co-efficient from Median from the following data :

Marks	10	20	30	40	50	60
No of students	4	7	15	8	7	4

15. *(a)* Calculate standard deviation from the following frequency distribution :

Size	5-7	8-10	11-13	14-16	17-19
Frequency	14	24	38	20	4

(OR)

(b) Calculate Karl Pearson's Co-efficient of skewness for the following data :

Profit (₹ in lakhs)	10-20	20-30	30-40	40-50	50-60
No of companies	18	20	30	20	10

PART—C   10×1=10

Instructions :   (1) Answer the following question.

                 (2) The question carries **ten** marks.

                 (3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

16. Calculate the mode value from the following data by grouping method :

Income	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
Frequency	10	5	15	10	20	20	9	6	5	0

★★★