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FACULTY OF ENGINEERING & TECHNOLOGY

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LECTURE- 16

BSc (AG)
2nd Year , IIIrd Sem.
Statistical Methods
AES-213

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Outline of lecture

- Measure of Dispersion
- Numerical Problems on Range
- Problem on range of Type I, II & III
- Suggested Readings & References

Numerical problems based on Range, Standard Deviation & Variance

There are three types of numerical problems in range, standard deviation & variance according to the given observations.

- Type I
- Type II
- Type III

We discuss one by one both types.

Numerical problems on Range Type I & Type II

Type:- I.

Question:- Find range & coefficient of range from no:
8, 10, 19, 2, 4, 33

Answer:- Range = L - S
= 33 - 2
= 31

coefficient of range = $\frac{31}{35}$
= 0.88

Type - II

Question :- Find the range and coefficient of range

Number	5	8	7	19	23
frequency	4	3	2	1	7

Answer :- range = 23 - 5
= 18

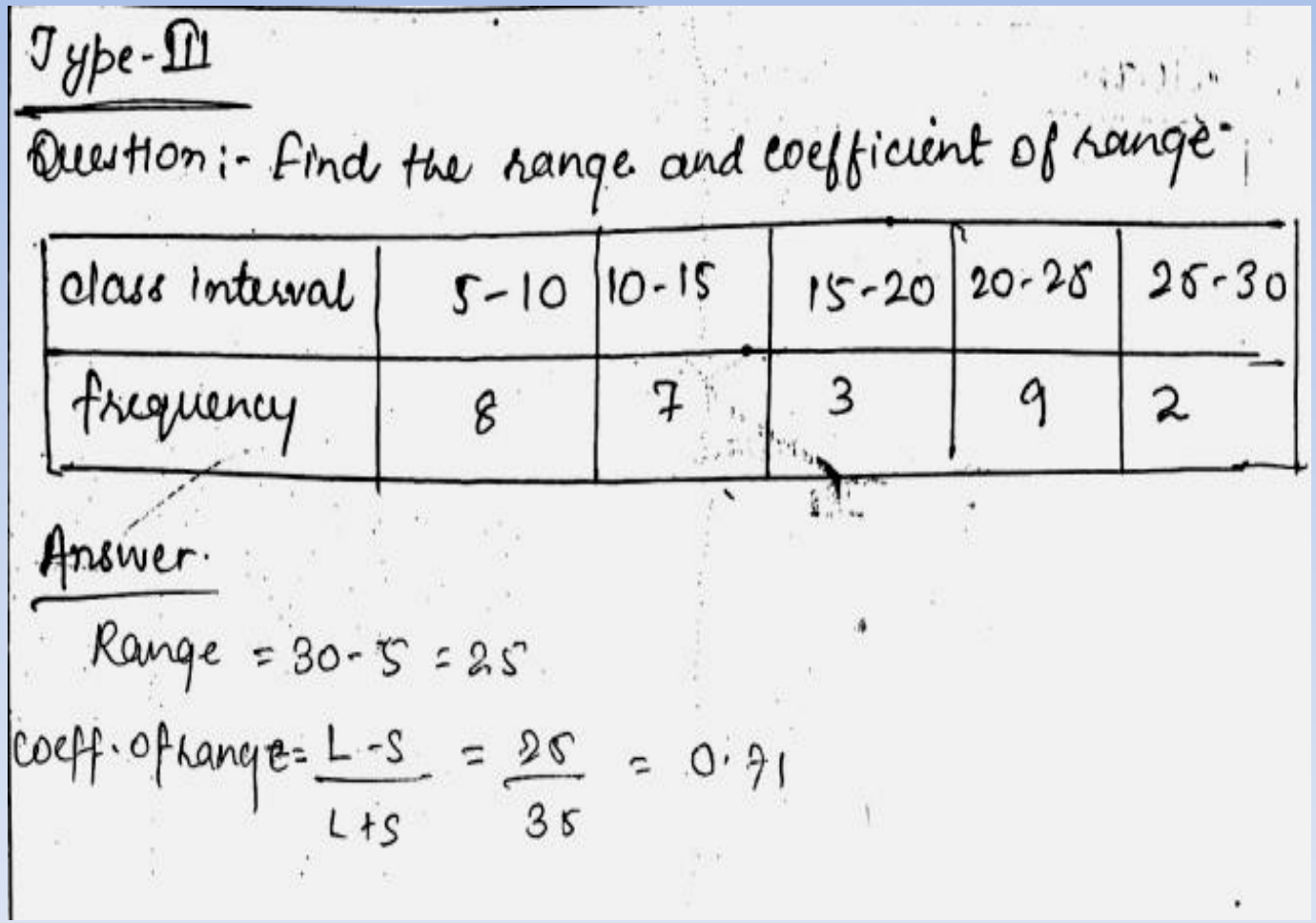
coefficient of Range = $\frac{L - S}{L + S}$

= $\frac{23 - 5}{23 + 5}$

= $\frac{18}{28}$

= 0.64.

Numerical problems on Range Type III



Type-III

Question:- Find the range and coefficient of range.

class interval	5-10	10-15	15-20	20-25	25-30
frequency	8	7	3	9	2

Answer.

Range = 30 - 5 = 25

Coeff. of range = $\frac{L-S}{L+S} = \frac{25}{35} = 0.71$

Suggested Readings & References

1) Statistical Methods: P.N. Arora, Sumeet Arora & S. Arora; S. Chand & Company Ltd.

2) Fundamental of Mathematical Statistics: S.C. Gupta & V. Kapoor; Sultan Chand & Sons.

3) Statistics: M.R. Spiegel; Schaum's Outline Series, Mc-Graw Hill Publication.

4) Advanced Engineering Mathematics: Erwin Kreyszig; John Wiley & Sons Inc.

5) Elements of Statistics: J.P. Chauhan & S. Kumar; Krishna Publication.

* THANK YOU *