B.Com(CS) DEGREE EXAMINATION,APRIL 2019
II Year III Semester
Statistics - I

Time : 3 Hours **Max.marks :75**

Section A $(10 \times 2 = 20)$ Marks

Answer any **TEN** questions

1. Explain mailed questionnaire method.
2. Write a short note on Pilot study.
3. Mention various types of data
4. Explain Histogram.
5. What are the various types of averages?
6. From the following data of the wage of 7 workers, compute the median wage:

   Wage (in Rs.) : 4100 4150 6080 7120 5200 6160 7400
7. Calculate coefficient of Range from the following data:

Marks	No. Of students	Marks	No. Of students
10 – 20	8	40 – 50	8
20 – 30	10	50 – 60	4
30 – 40	12		

8. Given $n_1 = 10$, $n_2 = 15$, $\overline{x_1} = 100$, $\overline{x_2} = 300$. Calculate combined mean.
9. What is meant by combined standard deviation? Write down the formula.
10. What is t-test?
11. Calculate Mode:

Sl.No	1	2	3	4	5	6	7	8	9	10
Marks Obtained	10	27	24	12	27	27	20	18	15	30

12. Find the Harmonic mean from the following:

    2574 475 75 5 0.8 0.08 0.005 0.0009

Section B $(5 \times 5 = 25)$ Marks

Answer any **FIVE** questions

13. Explain in detail the various methods of collecting primary data.
14. What is tabulation of data? Explain the various parts of a table.

15. Calculate the lower and upper quartiles from the following data:

Central value	2.5	7.5	12.5	17.5	22.5
Frequency	7	18	25	30	20

16. From the prices of shares of X & Y below find out which is more stable in value:

X	35	54	52	53	56	58	52	50	51	49
Y	108	107	105	105	106	107	104	103	104	101

Compare coefficient of variations

17. From the following information, find the standard deviation of X and Y variables:

$\sum x = 235$, $\sum x^2 = 6750$, $\sum y = 250$, $\sum y^2 = 6840$, $N = 10$

18. Calculate median from the following

x:	10	20	30	40	50
f:	6	12	22	6	4

19. A company has been producing steel tubes of mean inner diameter of 2.00 cm. A sample of 10 tubes gives an inner diameter of 2.01 cm and a variance of 0.004 cm^2. Is the difference in the value of mean significant?

Value of t for 9df at 5% level $= 2.262$

Section C $(2 \times 15 = 30)$ Marks

Answer any **TWO** questions

20. What are the various types of diagrams? Explain.

21. Find the missing frequency if arithmetic mean is 28 of the data given below: find the median of series given below.

Profits per shop	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60
No of shops	12	18	27	?	17	6

22. Calculate the mean deviation and its coefficient from the following data:

Class	Frequency	Class	Frequency
0 – 10	5	40 – 50	20
10 – 20	8	50 – 60	14
20 – 30	12	60 – 70	12
30 – 40	15	70 - 80	6

23. Calculate Bowley's coefficient of skewness for the data given below:

Wieght (in lb)	No. Of students	Weight (in lb)	No. Of students
Below 99	1	150 – 159	65
100 – 109	14	160 – 169	34
110 – 119	66	170 – 179	12
120 – 129	122	180 – 189	5
130 – 139	145	190 – 199	2
140 – 149	121	Above 200	2

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