B.Com.(CS) DEGREE EXAMINATION,NOVEMBER 2018
II Year III Semester
Core Major- Paper VIII
STATISTICS - I

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

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

Answer any **TEN** questions

1. What is the method of collecting primary data
2. What is meant by Pilot survey
3. List down the different types of bar diagram
4. Write a short note on class interval and class limits
5. From the following data of the marks obtained by 60 students of a class, calculate Arithmetic mean

Marks	No of Student
20	8
30	12
40	20
50	10
60	6
70	4

6. From the following data compute the value of harmonic mean

Marks	10	20	25	40	50
No. Of students	20	30	50	15	5

7. Write down the formula for median under individual observation, discrete series and continuous series.
8. The following are the prices of shares of H ltd from Monday to Saturday, Calculate Range

Day	Price
Monday	200
Tuesday	210
Wednesday	208
Thursday	160
Friday	220
Saturday	250

9. Find out the value of 3rd quartile (Q3) from the following data:

Roll No	1	2	3	4	5	6	7
Marks	20	28	40	12	30	15	50

10. What is meant by symmetrical distribution?
11. A random sample of size 16 has 53 as mean. The sum of the squares of the deviations taken from mean is 135, can the sample be regarded as taken from the population having 56 as mean? (for v = 15, t0.05 = 2.13 for v = 15, t0.01 = 2.95)
12. How many methods are there for constructing Ogive? Name them.

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

Answer any **FIVE** questions

13. What is secondary data? Explain
14. Draw a multiple bar diagram from the following data:

Year	Sales ('000 Rs)	Gross Profit('000 Rs)	Net Profit('000 Rs)
2004	120	40	20
2005	135	45	30
2006	140	55	35
2007	150	60	40

15. An incomplete distribution is given below:

Variable	0 - 10	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60	60 - 70
Frequency	10	20	?	40	?	25	15

You are given the median value is 35. Find out the missing frequency (given the total frequency = 170)

16. Calculate third decile and 20th Percentile from the following data

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

17. Find the weighted geometric mean from the following data:

Group	Index number	Weights
Food	260	46
Fuel and lighting	180	10
Clothing	220	8
House rent	230	20
Education	120	12
Misc	200	4

18. Calculate mean deviation and its coefficient from the following data

Class	Frequency
0 - 10	5
10 - 20	8
20 - 30	12

30 - 40	15
40 - 50	20
50 - 60	14
60 - 70	12
70 - 80	6

19. Find Bowley's coefficient of Skeweness for the following frequency distribution

No of children per family	0	1	2	3	4	5	6
No of families	7	10	16	25	18	11	8

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

Answer any **TWO** questions

20. From the following data of weight of 122 persons determine the model weight:

Weight(in lbs)	No of persons
100 - 110	4
110 - 120	6
120 - 130	20
130 - 140	32
140 - 150	33
150 - 160	17
160 - 170	8
170 - 180	2

21. The following are some of the particulars of the distribution of weight of boys and girls in a class

	Boys	girls
Number	100	50
Mean weight	60 kg	45 kg
variance	9	4

a) find the standard deviation of the combined data

b) which of the two distribution is more variable?

22. Calculate Karl Pearson's Coefficient of Skeweness:

Variable	Frequency
70 - 80	11
60 - 70	22
50 - 60	30
40 - 50	35
30 - 40	21
20 - 30	11

10 - 20	6
0 - 10	5

23. The life time of electric bulbs for a random sample of 10 from a large consignment gave the following data:

Item	Life in '000 hours
1	4.2
2	4.6
3	3.9
4	4.1
5	5.2
6	3.8
7	3.9
8	4.3
9	4.4
10	5.6

Can we accept the hypothesis that the average life time of bulbs is 4000 hours.