11. Why AM is considered as the best average ?
12. How do you test the presence of skewness in a distribution ?
13. What are the methods of studying correlation ? Explain each.
14. Define index number.

PART – C

(Short essay questions.)

Answer **any 4** questions. **Each** question carries **3** marks. **(4×3=12)**

15. Define statistics as methods. Write the limitations of statistics.
16. Find the value of mode from the following data :

X :	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60
F :	8	22	14	18	7	6

17. A random sample of 100 households' weekly food expenditure represented by X from a particular city gave the following statistics :

    $\sum x_i = 11{,}000$ and

    $\sum x^2 = 1{,}900{,}000$

    Find the mean and standard deviation for these data.
18. Calculate the average speed of a car running at the rate of 20 km.ph. during the first 30 kms., at 28 km.ph. during the second 30 kms. and at 25 km.ph. during the third 30 kms.
19. Draw a less than ogive for the following data and hence find the median.

Class :	0 – 3	4 – 7	8 – 11	12 – 15	16 – 19
Frequency :	7	4	19	12	8

20. Find out 5 yearly moving average for the following data :

Year :	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Price :	20	25	33	33	27	35	40	43	35	32	37

Year :	1993	1994	1995	1996
Price :	48	50	37	45

K23U 4088

Reg. No. : .....

Name : .....

I Semester B.Sc. Degree (C.B.C.S.S. – O.B.E. – Regular/Supplementary/ Improvement) Examination, November 2023
(2019 Admission Onwards)
COMPLEMENTARY ELECTIVE COURSE IN STATISTICS
1C01 STA : Basic Statistics

Time : 3 Hours Max. Marks : 40

***Instruction** : **Use** of calculators and statistical tables are **permitted**.*

PART – A

Answer **all** questions. **Each** question carries **one** mark. **(6×1=6)**

1. Distinguish between qualitative and quantitative data.
2. What do you mean by simple random sample ?
3. What do you mean by coefficient of variation ?
4. Define kurtosis and write the formula for finding kurtosis using moments.
5. Define partial correlation coefficient.
6. What do you mean by irregular variation ?

PART – B

(Short answer questions.)

Answer **any 6** questions. **Each** question carries **2** marks. **(6×2=12)**

7. Differentiate census and sampling.
8. Briefly explain the methods of collecting a primary data.
9. In a moderately skewed distribution mode = 17; mean = 14; find the value of the median.
10. Find the SD of natural numbers from 1 to 15.

P.T.O.

PART – D

(Essay questions.)

Answer **any 2** questions. **Each** question carries **5** marks. **(2×5=10)**

21. Calculate Karl Pearson's measure of skewness for the following data. What is your interpretation about the data ?

Values :	5 – 10	10 – 15	15 – 20	20 –25	25 – 30	30 –35	35 – 40
Frequency :	6	8	17	21	15	11	2

22. Obtain the regression equation Y on X and estimate Y when X = 55 from the following :

X :	40	50	38	60	65	50	35
Y :	38	60	55	70	60	48	30

23. Calculate Laspeyre's, Paasches and Fisher's index number for the following data :

Commodity	Base Year		Current Year	
	Quantity	Price	Quantity	Price
Sugar	8	15	12	17
Wheat	12	23	20	27
Rice	30	12	25	8
Cotton	5	14	6	12

24. Define time series. What are the various components of time series ? Explain each. Explain the methods that are used in isolating secular trend.