

B.Com (CS) DEGREE EXAMINATION, EVEN SEMESTER 2021**II Year IV Semester****Statistics - II**

Max Marks: 25

Answer any **Five** questions (5 * 5 = 25) Marks

1. Briefly explain the process of fitting second degree parabola in a least square problem.

2. From the following data obtain the regression equation for determining the purchases: (*Rs. in Crores*)

Sales	91	97	108	121	67	124	51	73	111	57
Purchases	71	75	69	97	70	91	39	61	80	47

3. The following table gives the number of motor cars produced in a country over ten years: (*Production is given in '000 Units*)

Year	1	2	3	4	5	6	7	8	9	10
Production	96	74	68	50	99	172	245	302	332	345

Evaluate trend by the method of three yearly moving averages.

4. Calculate Paasche's index number for the following details:

Commodity	2019		Value for 2020 Rs.
	Price Rs.	Quantity	
A	12	30	525
B	7	12	150
C	9	10	84
D	15	20	216
E	10	15	180

5. Write a note on (i) Time Reversal Test and (ii) Factor Reversal Test.

6. Compute co-efficient of correlation for the following data through Karl Pearson's Co-efficient of Correlation Method:

X	25	35	45	52	20	33	40	30
Y	20	15	10	14	23	18	22	30

7. Perform an F-Test for the following samples at 95% confident level:

- Sample 1 with variance equal to 109.63 and sample size equal to 41.
- Sample 2 with variance equal to 65.99 and sample size equal to 21.

NOTE: The critical value for (40, 20) at alpha equal to 0.025 is 2.287.