SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN (AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)

Chromepet, Chennai — 600 044.

B.Com.(PA) END SEMESTER EXAMINATIONS APRIL-2022

SEMESTER - II

21UPAAT2002 - Business Statistics

Total Duration : 3 Hrs.   **Total Marks : 60**

Section A

Answer any **SIX** questions $(6 \times 5 = 30$ Marks$)$

1. Explain the types of Classification with examples.

2. Calculate Coefficient of Correlation from the following data.

X	12	9	8	10	11	13	7
Y	14	8	6	9	11	12	3

3. Convert the following Fixed Base Index Numbers into Chain Base Index Numbers.

Year	2010	2011	2012	2013	2014	2015
FBI	376	392	408	380	392	400

4. State and prove Addition Theorem on Probability.

5. Write a short note on Simple Random Sampling.

6. Explain the types of correlation.

7. Ten coins are thrown simultaneously. Find the probability of getting at least seven heads.

8. The following results are obtained from a sample of 10 boxes of biscuits:
   Mean weight of contents: 490 gms.
   Standard Deviation of the weight: 9 gms.
   Could the sample come from the population having a mean of 500 gms at 1% level of Significance.

Section B

Answer any **THREE** questions $(3 \times 10 = 30$ Marks$)$

9. Calculate Mean, Median and Mode for the following data:

Weight (in gms)	410-419	420-429	430-439	440-449	450-459	460-469	470-479
No. of Mangoes	14	20	42	54	45	18	7

Contd...

10. Calculate the two regression equations of X on Y and Y on X from the data given below, and also estimate the demand when the price is Rs.20.

Price (Rs.)	10	12	13	12	16	15
Demand	40	38	43	45	3	43

11. Calculate Price Index Numbers for the following data by (i) Laspeyre's Method (ii) Paasche's Method (iii) Marshall Edgeworth Method and (iv) Fisher's Ideal Method.

Commodity	2014		2015	
	Price	Quantity	Price	Quantity
A	20	8	40	6
B	50	10	60	5
C	40	15	50	15
D	20	20	20	25

12. Fit a Poisson distribution to the following data and calculate the theoretical frequencies.

X	0	1	2	3	4
F	123	59	14	3	1

13. Out of 8000 graduates in a town, 800 are females; out of 1600 graduate employees 120 are female. Use χ^2 to determine if any distinction is made in appointment on the basis of sex.

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