



B.Com IV Semester Degree Examination, August/September - 2022

COMMERCE

Quantitative Techniques - II

(General)

(NEW-CBCS)

Maximum Marks : 70

Time : 3 Hours

SECTION - A

- I. Answer any 5 Questions from the following. Each carry 2 marks. 5x2=10**
1. What is multiple correlation ?
 2. Write any two merits of Rank correlation.
 3. What do you mean by probable error with formula ?
 4. State any two advantages of Regression.
 5. What are the elements of time series ?
 6. Define value of Index Number.
 7. What are mutually exclusive Events ?

SECTION - B

- II. Answer any 3 questions from the following. Each carry 5 marks. 3x5=15**
- 8. Calculate the Spearman's coefficient of Rank correlation between marks assigned 10 students.**

Students	1	2	3	4	5	6	7	8	9	10
X	52	53	42	60	45	41	39	38	25	27
Y	65	68	43	38	77	48	35	30	25	50

- 9. Write the Differences between correlation and regression.**



P.T.O.

10. Calculate Five Yearly Period of moving average draw the trend for the data given below.

Year	Production (in 000 units)
1998	14
1999	17
2000	22
2001	28
2002	26
2003	18
2004	20
2005	24
2006	25
2007	29
2008	30
2009	23

11. The following are the index numbers of prices recast the index numbers taking 2014 as base year.

Year	Index
2008	100
2009	110
2010	120
2011	120
2012	200
2013	410
2014	400
2015	380
2016	370

12. A box contains 5 white balls, 4 black balls and 3 red balls. Three balls are drawn Randomly. What is the probability that they will be ?
- (i) White
 - (ii) Black
 - (iii) Red



SECTION - C

III. Answer **any 3** of the following questions each carry **15** marks.

3x15=45

13. A Survey regarding the income and savings of 100 teachers in a city provided the following data. Compute the coefficient of correlation between income and savings

Income Savings	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60	Total
10 - 20	6	3	-	-	-	9
20 - 30	3	16	10	-	-	29
30 - 40	-	10	15	7	-	32
40 - 50	-	-	7	10	4	21
50 - 60	-	-	-	4	5	9
Total	9	29	32	21	9	100

0.95

14. Calculate regression equation from the data given below taking deviations from actual mean of X and Y :

X	40	34	28	30	44	38	31
Y	32	39	26	30	38	34	28

Find the value of Y when X is 36

15. Fit a straight line trend by the method of least squares in the following data.

Year	2011	2012	2013	2014	2015	2016	2017
Earnings (lakhs)	80	90	92	83	94	99	92

Calculated trend for all years find estimate the value for year 2018.

16. From the following data you are required to calculate Laspeyre's Paasche's, Fisher's index numbers :

Commodity	Base Year		Current Year	
	Price	Value	Price	Value
A	4	200	10	400
B	5	100	8	64
C	2	10	4	16
D	10	50	20	80



P.T.O.

17. Two fair Dice are rolled simultaneously. Find the probability that :
- (a) The sum is equal to 4
 - (b) The sum of the Numbers is a perfect square
 - (c) The sum of the Number is less than 1

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