

B.Com. IV Semester Degree Examination, June- 2018

COMMERCE

Quantitative Techniques - II

(General & TPP)

(New)

Time : 3 Hours

Maximum Marks : 80

Instructions to Candidates:

Attempt all (questions) sections according to internal choice.

SECTION - A

Answer any **TEN** questions from the following :

(10×2=20)

1. What are the objectives of time series.
2. What do you mean by random variations.
3. Mention the types of index numbers.
4. State any two differences between Fixed Base chain Base method.
5. Write down the formula of Fisher's ideal Index number?
6. What do you mean by Negative correlation. Give two examples.
7. Mention two merits of correlation.
8. What is scatter diagram.
9. Define Regression.
10. State the two Regression Equations.
11. What is event and null event.
12. What do you mean by experiment and random experiment.

SECTION - B

Answer any **THREE** questions from the following.

(3×5=15)

13. Distinguish between seasonal variation, cyclical variation and secular trend.

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14. Calculate price index number for 2016 on the basis 2015 from the data given bellow.

Items	Weight	2015 Price	2016 Price
A	40	16	20
B	25	40	60
C	5	0.50	0.50
D	20	5.12	6.25
E	10	2.00	1.50

15. Calculate co-efficient of correlation from the following data.

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

16. From the following data obtain the regression equation of Y on X.

X:	10	6	10	6	8
Y:	6	2	10	4	8

17. From a well shuffled pack of cards 3 card are drawn what is the probability that three are kings?

SECTION - C

Answer any three of the following questions :

(3×15=45)

18. Fit a straight line trend by the method of least squares to the following data and show trends for all the years.

year :	1994	1995	1996	1997	1998	1999	2000
production tons :	80	90	92	83	94	99	92

19. From the following data prove that Fishers Ideal Index satisfies both TRT and FRT (Time Reversal Test, Factor Reversal Test).

Items	2010		2015	
	Price	quantity	Price	Quantity
A	5	10	6	12
B	7	12	10	8
C	10	8	12	8



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D	4	5	5	6
E	8	7	8	8

20. Calculate co-efficient of correlation between the marks obtained by a batch of 100 students in A/C s and Q.T marks in A/cs.

Marks in Q.T.	Marks in A/Cs					Total
	20-30	30-40	40-50	50-60	60-70	
15-25	5	9	3	-		17
25-35		10	25	2		37
35-45		1	12	2		15
45-55			4	16	5	25
55-65				4	2	6
Total	<u>5</u>	<u>20</u>	<u>44</u>	<u>24</u>	<u>7</u>	<u>100</u>

21. Find the two lines of regressions from the following data by assumed mean method.

X: 10 12 13 12 16 15 12

Y: 40 38 43 45 53 43 40

Estimate Y when X is 18.

22. Define probability? Explain types of events in brief with examples?