

B.Com. IV Semester Degree Examination, May/June - 2019

COMMERCE

Quantitative Techniques - II

Time : 3 Hours

Maximum Marks : 70

Instructions to Candidates:

Attempt all the sections according to internal choice.

SECTION - A

Answer any five of the following questions.

(5×2=10)

1. What is perfect positive correlation.
2. Give the meaning of spearman's Rank-correlation.
3. Mention the types of Regression.
4. What are the steps to compute odd numbers of moving Averages?
5. What do you mean by erratic variations?
6. What do you mean by weighted Average of price Relatives?
7. What are dependent events.

SECTION - B

Answer any three of the following questions.

(3×5=15)

8. Calculate Spearman's Co-efficient of correlation between the marks arising to ten students by Judges X and Y in a competition.

X	52	53	42	60	45	41	37	38	25	27
Y	50	55	57	45	38	27	37	41	48	52



9. From ten observation of price X and supply Y of a commodity the result obtained is $\Sigma x = 130$, $\Sigma y = 220$, $\Sigma x^2 = 2288$, $\Sigma xy = 3467$. Compute the regression of y on x and interpret the result. Estimate the supply when the price is 16 units.

10. Fit a straight line trend by the method of least squared from the following data and estimate the sales for the year 1998.

Year:	1990	1991	1992	1993	1994	1995	1996
Sales:	100	105	109	96	102	108	112
(000's)							
units							

11. An enquiry into the budget of middle class families in Bangalore gave the following information.

Expenses on	Price 2015	Price 2016	Weight
Food	150	174	35
Rent	50	60	15
Cloth	100	125	20
Fuel	20	25	10
Miscellaneous	60	90	20

What changes in the cost of living figure of 2016 take place compared to 2015.

12. Write a note on;

- 1) Event
- 2) Favorable Event
- 3) Compound Event

SECTION - C

Answer any **three** of the following questions.

(3×15=)

13. Calculate from the data reproduced below pertaining to 66 selected villages in Belgaon district, the value of 'r' between total cultivable area and the area under sugarcane

Area under Sugar cane (in acres)	Total cultivable area (in acres)					Total
	0-500	500- 1000	1000- 1500	1500- 2000	2000 2500	
0 - 200	12	06	-	-	-	18
200 - 400	2	18	4	2	1	27
400 - 600	-	4	7	3	-	14
600 - 800	-	1	-	2	1	4
800 - 1000	-	-	-	1	2	3
Total	14	29	11	8	4	66



14. Construct two regression equations for the following data and estimate the value of X when Y is 70 and when X = 650.

X:	100	200	300	400	500	600	700
Y:	30	50	60	80	100	110	130

15. a) Explain briefly the various methods of determining trends in time series.
 b) Calculate 3 yearly moving Averages for the following data Draw the Actual trend and trend value of the same.

Year	Sales (000's)	Year	Sales (000's)
2001	21	2006	22
2002	22	2007	25
2003	23	2008	26
2004	25	2009	27
2005	24	2010	26

16. Compute Fishers Ideal Index Number and show that how it satisfies Time Reversal Test and-Factor Reversal Test.

Items	Base year		Current year	
	Value	Quantity	Value	Price
A	300	150	480	4
B	50	10	90	6
C	48	12	50	5
D	120	60	100	2
E	60	20	105	3.5

17. What is probability? Explain its importance, uses and limitations in brief.



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