23405

B.Com. IV Semester Degree Examination, May/June - 2019
COMMERCE
Quantitative Techniques - II
(New)

Time : 3 Hours   Maximum Marks : 80

Instructions to Candidates:

Attempt **all** sections according to internal choice.

SECTION - A

Answer any **Ten** of the following questions.   (10×2=20)

1. Give two utility of Regression Analysis.

2. Name the types of Regression.

3. Write two normal equations for regression equation of Y on X.

4. What is Non Sense Correlation.

5. Define linear correlation.

6. Name any two methods of measuring secular trend.

7. State two objectives of time series.

8. State two demerits of Rank correlation.

9. Define cyclical variations give an example.

[P.T.O

10. What do you mean by index Number.

11. What is base shifting.

12. Define probability of an event.

SECTION - B

Answer any **Three** of the following questions.   (3×5=15)

13. From the data given below compute the regression equation of Y on X by the method of least squares.

    X: 10   15   35   40   50
    Y: 100 90   110 80   120

14. Calculate KPCC from the Advertisement cost and sales as per the data given below.

    Advt Cost : 39   65   62   90   82   75   25   98   36   78
    Sales in (Rs): 47   53   58   86   62   68   60   91   51   84

15. What is time series? Briefly explain the components of time series.

16. An enquiry into the budgets of middle class families in Bellary gave the following information.

Items	2009 Expenses	2009 Price relatives
Food	40%	116
Rent	10%	120
Clothing	15%	125
Fuel	15%	125
Miscelleneous	20%	150

    Construct the cost of living index number.

17. Define probability? Explain its importance?

SECTION - C

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

(3×15=45)

18. From the following data compute the co-efficient of correlation between the marks in QT and marks in F.A.

Marks FA \ Marks QT	10-20	20-30	30-40	40-50	50-60	f.
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
f	9	29	32	21	9	100

19. Calculate the two Regression equations of X on Y and Y on X from the data given below.
    Price: 10   12   14   16   18   20
    Demand kgs: 40   38   43   45   34   40
        Estimate likely demand when the price is Rs.25.

20. Compute trend values by fitting a straight line trend for the following data by the method of least squares plot the original data and trend values on a graph.
    Year: 2001   2002   2003   2004   2005   2006   2007
    Values: 75   70   72   65   50   54   41.

21. Compute Fishers ideal index Number and show that it satisfies time reversal Test and factor reversal test.

Commodity	2006		2008	
	Price	Quantity	Price	Quantity.
A	2	100	2	120
B	6	50	10	56
C	4	60	6	60
D	8	40	12	36
E	10	30	12	24

22. Write a Note on:
    a) Mutually exclusive events and exhastive event.
    b) Independent and dependent events.
    c) Simple and compound events with examples in each case.