St Josephs College [Autonomous]Bangalore -27
B.A – III Semester Exam: November- 2020
ECA3118- Statistical methods for Economics

Time: 2.30 hrs.   Max Marks -70

This paper has 2 printed pages and 3 sections :

Section A

I. Answer any 10 of the following: [10 x 3 = 30]

1) Name the 4 major basis of classification of data.

2) Following are the marks scored by 7 firms in their over all ranking done by confederation of Industry[COI]. Obtain median score. The score provided by COI are
   → $45,70,90,60,75,40$ *and* 50

3) Locate the mode from the following frequency distribution of target of sales and firms in a monopolistic market. The target of sales[x]→ 40,50,60,70,80 and 90 .Thefrequency of number of firms [f]→10,8,20,10, 8 and 9.

4) During this season of Covid -19 , the highest average nominal interest rate offered by market in developed countries is 100 points and lowest is 75 points, calculate the relative measure of range [coefficient measure of range].

5) A researcher , who did not want to ignore individual observations opted for mean deviation and accordingly found the following results →
   Mean deviation as 1.6. And arithmetic mean as 13 .calculate percentage of mean deviation .

6) What arethe 3 types of Kurtosis ?

7) To calculate the symmetrical distribution in a given observations of Investment programmes where arithmetic mean was 25.88, mode was 26, And standard deviation was 3.7323 calculate Skewness according to Karl Pearson.

8) The ranks of 15 students in -Economics and Statistics were calculated , find rank correlation according to Spearman's rank correlation coefficient, when d^2=198 .

9) State the normal Regression equation of X on Y and Y on X

10) What are components of time series ?

11) In a Monopolistic competition market ,10 firms are producing close substitute products and 20 firms are producing distant substitute products. what is the probability that firms producing close substitute are performing well?

12) Differentiate between questionnaire and schedule.

Section B

II. Answer any 2 of the following: [2 x 5 = 10]

13) Find the standard deviation and CV from the following

C- I	9.5-10.5	10.5-11.5	11.5-12.5	12.5-13.5	13.5-14.5
F	3	12	18	12	3

14) Calculate the Karl Pearson's correlation coefficient 'r' for the following:

X	52	56	58	62	66	68
Y	33	36	42	42	45	51

15) What is tabulation? Name the parts of a table.

Section C

III. Answer any 2 of the following: [2 x 15 =30]

16) Find mode by grouping method

Wage rate	F	Wage rate	F
5-6	10	50-60	3
6-7	2	60-70	7
7-8	20	70-80	17
8-9	3	80-90	19
9-10	8	90-100	16
10-11	4	100-110	4

17) Obtain regression equations Y on X and X on Y .

X	2	4	6	8	10
Y	5	7	9	8	11

18) Compute index number using Fishers ideal formula and show that it satisfies time reversal test and factor reversal test

Commodity	Base year Quantity	Base year Price	Current year quantity	Current year Price
A	12	10	15	12
B	15	07	20	05
C	24	05	20	09
D	05	16	05	14

****

ECA3118_A_20