ST. JOSEPH'S COLLEGE (AUTONOMOUS), BENGALURU-27
B.A. ECONOMICS – III SEMESTER
SEMESTER EXAMINATION: OCTOBER 2019
ECA 3118: STATISTCAL METHODS FOR ECONOMISTS

Time-2 ½ hrs   **Max Marks-70**

This paper contains 3 printed pages and 3 parts

I.   Answer any TEN of the following questions   **3x10=30**

1. Distinguish between primary and secondary data.

2. Construct frequency table from the marks obtained by 25 students

   60,65,50,65,35,40,30,35,40,45,50,45,35,45,35,35,25,40,50,55,40,35,33,40,45.

3. What is stratified sampling?

4 . Calculate median from the following data:

Marks	0-5	10-May	15-Oct	15-20	20-25	25-30	30-35	35-40	40-45
No. of students	29	195	241	117	52	10	6	3	2

5. State the empirical relationship between the mean, median and mode. If mean=200 and   mode=150 find median.

6. What are the measures of dispersion?

7. Define the classical definition of probability.

8. State the meaning of Kurtosis with the help of a diagram.

9. Mention any three objectives of regression.

10. What are the components of time series?

11. Calculate the range and its coefficients from the data given below.

S.no	1	2	3	4	5	6	7	8	9	10
Values	391	384	591	407	672	522	777	733	2488	1490

12. What are time reversal and factor reversal tests?

PART B

II.   **Answer any TWO of the following questions.**   5x2=10

13.   Represent the following data in histogram, frequency polygon and frequency curves.

Salary(Rs)	0-10	10-20	20-30	30-40	40-50	50-60	60-70
No of employees	5	8	10	15	12	6	3

14. For the following data, calculate Karl Pearson's   Co-efficient of correlation and interpret it.

Economics (Y)	48	65	50	48	55	58	63	48	50	70
statistics (X)	50	60	58	47	49	33	65	43	46	68

15. Compute the standard deviation and its Coefficient of variation from the following data.

X	60	70	80	90	100	110	120
F	3	6	9	13	8	5	4

PART C

III. **Answer any TWO of the following questions.**   **15x2=30**

16. From the following data obtain two regression equation

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

17. Calculate Fisher's Ideal index numbers from the following data and prove that it satisfies both the time reversal and factor reversal tests.

Commodity	2006		2007	
	price	expenditure	price	expenditure
A	8	80	10	120
B	10	120	12	96
C	5	40	5	50
D	4	56	3	60
E	20	100	25	150

18. Estimate Bowley's   coefficient of skewness for the following distribution and comment on it.

variable	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Frequency	12	16	26	38	22	15	7	4