

DATE:05-03-22

Registration number:

 ST. JOSEPH’S COLLEGE (AUTONOMOUS), BENGALURU-27

 B.A. ECONOMICS – III SEMESTER

SEMESTER EXAMINATION: OCTOBER 2021

(Examination conducted in March 2022)

 **ECA 318 - Statistical Methods for Economics**

Time- 2 ½ hrs Max Marks-70

This question paper contains 2 printed pages and 3 parts

**Part – A**

**Answer any 10 of the following [3X10 = 30]**

1. What is Random sampling?
2. Following are the Total revenue earned by a Start -Up firm in the initial 5 months, find the arithmetic mean if the values of total revenue are - 3, 5,8,12 &15.
3. Given the following analyzed values for marks obtained by students, A = 50, Σfd = 1250 and N = 50, by deviation method obtain arithmetic mean.
4. Of the Monthly income earned by different members of family highest income among them was ₹7000 and lowest income was ₹ 1000, find the coefficient of Range
5. Find the Skewness , using Karl Pearson’s Coefficient of Skewness , if the mean value = 111.46 and mode value = 116.15 and standard deviation value = 17.595
6. If Σ d2 = 1236 represents deviation of ranks between Rank of Profit and Rank of working capital of companies , while their number is N = 16 find Rank Correlation.
7. What are the Regression equations of Y on X and X on Y?
8. What are the different types of classification of data?
9. Mention the different components of Time series
10. Define Kurtosis.
11. State any 4 uses of Index numbers
12. What is Time Reversal Test?

**Part – B**

**II. Answer any 2 of the following [5X2 = 10]**

1. Find the Median Wages of the following distribution

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Wages (X) | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 |
| Number of employees ( f) | 5 | 3 | 8 | 15 | 12 |

1. Calculate Coefficient of Correlation for the following data.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Income | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| Saving | 66 | 67 | 65 | 68 | 70 | 68 | 72 |

1. Calculate mean deviation from mean for the following information.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Quality ranking (C-I) | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 |
| Number of firms (F) | 12 | 16 | 8 | 10 | 12 | 10 |

1. Explain the problems in construction of Index Numbers

**Part – C**

**III. Answer any 2 of the following [15X2 = 30]**

1. Find Mode by Grouping method:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Income levels  | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 | 70-80 | 80-90 |
| Number of families (f) | 5 | 12 | 15 | 20 | 18 | 10 | 6 | 4 |

1. Calculate Standard Deviation and coefficient of variation from the following

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Months  | 0-3 | 3-6 | 6-9 | 9-12 | 12-15 | 15-18 | 18-21 |
| Exports(f) | 2 | 7 | 10 | 12 | 9 | 6 | 4 |

1. (a) Illustrate the types of Correlations with the help of diagrams

(b) What is Tabulation? Explain the different parts of a table.