

**DATE: 13-04-2019**

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

**B.A .ECONOMICS - IV SEMESTER**

**SEMESTER EXAMINATION – APRIL 2017**

**ECA 415: Statistical Methods for Economics**

**Time: 1 ½ hr Max marks: 35**

**Supplementary candidates only.**

**Attach the question paper with the answer booklet**

**PART- A**

1. **Answer any Five of the following questions 5X3=15**
2. Draw a Bar diagram for the following data.

|  |  |  |
| --- | --- | --- |
| Household expenditure (in Rs) | | |
| Items | Family A | Family B |
| Food | 200 | 250 |
| Clothing | 100 | 200 |
| Education | 80 | 100 |
| Rent | 40 | 50 |
| Miscellaneous | 80 | 200 |
| Total | 500 | 800 |

1. Briefly explain different methods of sampling.
2. Obtain the mean for the following data by the step deviation method.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Marks | 40 | 50 | 60 | 70 | 80 |
| Frequencies | 2 | 1 | 1 | 3 | 2 |

1. Calculate Karl Pearson Correlation Coefficient ‘r’ for the marks scored by 6 students in Economics (X) and Statistics (Y)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Stats (X) | 52 | 56 | 58 | 62 | 66 | 68 |
| Economics (Y) | 33 | 36 | 42 | 42 | 45 | 51 |

1. Calculate the mean deviation for the following discrete data.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Marks | 75 | 50 | 46 | 43 | 25 |
| Frequency | 3 | 1 | 1 | 3 | 2 |

1. Estimate the range and its co efficient for the following data

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| marks | 10 | 45 | 65 | 74 | 88 | 98 |
| frequency | 5 | 7 | 9 | 3 | 2 | 1 |

**PART - B**

1. **Answer any TWO of the following questions 2X5=10**
2. Compute Laspeyre’s Index numbers for the following data.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | 1997 | | 2001 | |
| Price (Rs) | Quantity | Price (Rs) | Quantity |
| A | 5 | 25 | 6 | 30 |
| B | 3 | 8 | 4 | 10 |
| C | 2 | 10 | 3 | 8 |
| D | 10 | 4 | 3 | 5 |

1. From the following data obtain the X on Y regression equation.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| X | 6 | 2 | 10 | 4 | 8 |
| y | 9 | 11 | 5 | 8 | 7 |

1. Calculate the standard deviation for the following data.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| X | 10 | 11 | 12 | 13 | 14 |
| F | 3 | 12 | 18 | 12 | 3 |

**PART C**

1. **Answer any ONE of the following questions 1X10=10**
2. **Calculate the mode.**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Wage | 5 -6 | 6- 7 | 7 -8 | 8 - 9 | 9 - 10 | 10- 11 | 11-12 | 12-13 | 13-14 |
| Frequency | 10 | 2 | 20 | 3 | 8 | 4 | 3 | 7 | 17 |

1. Estimate Bowley’s quartile co efficient of skewness for the following distribution.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Heights (cm) | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 |
| Frequency | 4 | 3 | 6 | 2 | 5 | 3 | 2 | 4 |