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**SAINTGITS COLLEGE OF APPLIED SCIENCES**

**Second Internal assessment examination, April 2017**

**Department of BA, Semester 11**

**Elementary Statistics for Economics11**

Total : **80 marks** Time: **3 Hours**

**Section A**

*Answer any 10 questions. Each question carries 2 marks.*

1 Define the following

1. Advantages of census method
2. sampling error
3. Non-sampling error
4. Different types of regression
5. Scatter diagram
6. Find b**xy,** if 3x+2y+4=0 is the equation of x on y..
7. Time series
8. Index numbers
9. Methods of measuring trend.
10. Characteristics of index numbers.
11. Different types of correlation
12. Characteristics of a good sample

 **(10 X 2 = 20 marks)**

 **Section B**

*Answer any 6 questions. Each question carries 5 marks.*

1. Criteria for choosing a good sample
2. Advantages of census method.
3. Compute karl pearsons method

X: 2, 3, 4, 5, 6, 7, 8

 Y: 4, 5, 6, 12, 9, 5, 4

1. Find the regression equation y on x

X: 2, 3, 4, 5, 6

 Y: 3, 5, 4, 8, 9.

1. Uses of index numbers.
2. Apply the method of semi average for determining the trend

Year: 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008

Value: 10, 12, 15, 20, 18, 25, 24, 28, 34.

1. Differentiate Census method and Sample Survey method
2. Properties of correlation coefficient
3. Trend equation is y= 21+ 1.2 x with origin 2000.find the trend equation shifting the origin to 1998.

 **(6 X 5 = 30 marks)**

**Section C**

*Answer any 2 questions. It carries 15 marks.*

1. Find the trend for the following data using 2year weighted moving average with weights 1,2

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| value | 2 | 4 | 5 | 7 | 8 | 10 | 13 |

23. Fit a straight line trend to the following data by the Method of Least Squares.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Year | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| production | 60 | 72 | 75 | 65 | 80 | 85 | 95 |

Estimate the most likely estimated production for the year 2009.

24. Estimate the pasches Index Numbers

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| articles | A | B | C | D |
| 1980 PRICE | 7 | 4 | 6 | 5 |
| 1980 quantity | 49 | 40 | 90 | 25 |
| 1988 price | 8 | 6 | 8 | 7 |
| 1988 quantity | 72 | 72 | 160 | 21 |

25. Calculate the Coefficient of Correlation by spear mans method

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| X | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| y | 30 | 29 | 29 | 25 | 24 | 24 | 24 |

 **(2 X 15 = 30 marks)**

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