**SAINTGITS COLLEGE OF APPLIED SCIENCES**

PATHAMUTTOM P.O, KOTTAYAM

1ST INTERNAL EXAMINATION (AUG 2016)

BA corporate economics 1ST SEM semester

**Elementary Statistics for economics**

**Time: 2 Hours Total Marks: 50**

**PART A: answer all questions each one carries 1 mark**

1. Define sampling
2. Define sampling Error.
3. What is the range of correlation coefficient?
4. What is coefficient of determination?
5. What is the regression equation x on y? **(1X5=5)**

**PART B: answer any 5 questions each one carries 2 marks**

1. Explain the uses of correlation.
2. Find **bxy** if **3x+ 2y+4=0** is the equation of **x on y.**
3. If **r=0.6** and **n= 64**, find probable error and standard error?
4. Distinction between correlation and regression?
5. What are the different types of probability based sampling techniques?
6. Define Scatter diagram?

 **(2X5=10)**

**PART C: answer any 5 questions each one carries 4 marks**

1. **What are the characteristics of a good sample?**
2. In a partially destroyed record of an analysis of correlation data the following results are legible.

**Variance of x=9**, regression equations **8x-10y+66=0** and **40x-18y=214.**

Find 1) the mean value of **x and y** 2) the coefficient of correlation.

1. Calculate the coefficient of concurrent deviation from the following data:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| x | 20 | 25 | 30 | 15 | 28 | 32 | 35 | 17 | 29 |
| y | 30 | 18 | 25 | 10 | 30 | 25 | 15 | 30 | 27 |

.

1. Calculate product moment correlation from the following data

|  |  |  |
| --- | --- | --- |
| **series** | **x** | **y** |
| **No. of observations** | **20** | **20** |
| **Sum of squares of deviations from mean** | **136** | **138** |

Summation of product of deviations of x and y series from their respective mean=122.

1. What are the steps of the construction of a questionnaire
2. Out of the two lines of regression given by

**X+2y-5=0 and 2x+3y-8=0**. Which one is the regression line of x on y? **(4x5=20)**

**PART D: answer any one question which carries 15 marks**

1. From the following data of values of x and y, find the regression equation of y on x

X: . 2 3 4 5 6

Y: 3 5 4 8 9

1. Calculate Karl Pearson coefficient of correlation of the data

Price: 11 12 13 14 15 16 17 18 19 20

Demand: 30 29 29 25 24 24 24 21 18 15

 (15x1=15)