**Patan Multiple Campus**

**Practical No. 5: Correlation and Regression**

**Level:- TU BCA 3rd Semester**

**Date:- 2081/01/16**

**Subject: Probability and Statistics (CACS-202)**

**Roll No:- 13/080**

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**Question:-**

In a study between the amount of daily rainfall(X) and the quantity of air pollution removed(Y), following data were collected:

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **X** | **4.3** | **4.5** | **5.9** | **5.6** | **6.1** | **5.2** | **3.8** | **2.1** | **2** | **1.5** |
| **Y** | **12.6** | **12.1** | **11.6** | **11.8** | **11.4** | **11.8** | **11.2** | **13.2** | **15.1** | **18.2** |

1. Estimate the regression equation of pollution removed on daily rainfall.
2. Estimate the population removed when rainfall is 6.2.
3. Interpret the regression coefficient.
4. Find TSS, SSR and SSE.
5. Find coefficient of determination and interpret it.
6. Find Standard error of estimate.

**Working Expression:**