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S. No. of Question Paper : **GRPA**

Unique Paper Code : **3126005001**

Name of the Paper : **IT Skills and Data Analysis—II**

Name of the Course : **Credits 2 SEC**

Semester : **III**

Duration & Date : **09:00 AM 3rd December**

Maximum Marks : **40**

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt all of the three questions.

All questions carry equal marks.

Using the student assessment in a college, do following computations and visualizations in excel spread sheets:

1. Make scatter plot from the data for variables x1, x2, x3, x4, and y
2. Conduct a regression on 'y' of x1, x2, x3, x4, and x5. Interpret the coefficients, R square, and p-values of the coefficients.
3. Find correlation between x1 and x2, x1 and x3, x1 and x4, x1 and x5, and x1 and y.

4. Make histogram of x_1 , x_2 , x_3 , x_4 , x_5 , and y

5. A researcher wants to know if a new teaching method is more effective than the standard curriculum. The mean score of the national standardized test is 75, with a standard deviation of 10. The researcher samples 36 students taught by the new method and finds a mean score of 78. Find the value of z-statistic for hypothesis testing.

6. A random variable follows normal distribution, and has mean 8 and standard deviation 3. For which range of the random variable, the area under the curve will be approximately 68%, 95%, and 99 % respectively.

A handwritten signature in black ink, appearing to be 'B. Singh', is located in the lower right quadrant of the page.