

## Linear and Logistic Regression – Spot Question

1. Shown below is a simple model to express drain current as a function of Gate-to-Source Voltage for a MOS transistor. The measurements made were tabulated, as shown below.

<u>Drain Current <math>I_d</math></u> (mA)	<u>Gate-to-Source Voltage</u> (V)
0.734	1.1
0.886	1.2
1.04	1.3
1.19	1.4
1.35	1.5
1.50	1.6
1.66	1.7
1.81	1.8
1.97	1.9
2.12	2.0

- (a) Develop the linear regression equation for the above data.
- (b) Plot all the points, and compare how well they fit on the linear regression equation line.
- (c) Find the error (for all entries in table) between predicted values obtained from linear regression equation, and actual values seen in the table.