Assignment-I

Q-1 Create the relationship model for the given data as shown below and find the relationship b/w height & weight of TIET students. Also, unknown entry of CSED used having height 181cm, then Determine its weight.

Dataset of CSED-TIET students

Entries	Height (X) cm	weight (Y) kg
1	151	63
2	174	81
3	138	56
4	186	91
5	128	47
6	136	57
7	179	76
8	163	72
9	152	62
10	131	48

Q-2 The rent of a property in a particular area is provided to you. Find the relationship between area & rent using the concept of LR. Also, predict when area is 790 ft² then what is estimated rent?

Entries	Area (ft²)	Rent (₹)
1	340	500
2	1080	1700
3	840	1100
4	880	800
5	990	1400
6	510	500

Q-3 The marks obtained by a student in an examination according to spending study time in minutes. Total Marks or marks out of 2000 is given. Find the relationship b/w study time & marks by using the concept of linear regression. Also predict the marks for a student if he/she study for 790 minutes.

Entries	Study time (Minutes)	Marks obtained
1	350	520
2	1070	1600
3	630	1000
4	890	850
5	940	1350
6	500	490.

Q-4 Sales of a company in dollars for each years are shown below.

x (Year) :	2005	2006	2007	2008	2009
y (sales) :	12	19	29	37	45

(a) find the least sq. regression line, $y = ax + b$.

(b) Use the least sq. regression line as a model to estimate the sales of the company in 2012.