

# Numerical Method

## Assignment

### Unit 2 : Regression

1. Estimate the coefficient of  $y=ax+b$  from the following data using the least square method. (*Ans:  $y = -1.1379 + 2.8966 x$* )

X	0	2	5	7
Y	-1	5	12	20

2. Use regression method to fit the curve  $y= a+ bx+ cx^2$  to the data given below  
(*Ans:  $y = 2.07 + 0.511x + 0.061x^2$* )

X	-3	-2	-1	0	1	2	3
Y	1.1	1.3	1.6	2.0	2.7	3.4	4.1

3. Fit the following set of data to a curve of the form  $y=ae^{bx}$  (*Ans:  $9.484 e^{0.315x}$* )

X	2	4	6	8
y	25	38	56	84

4. Fit the following set of data to a curve of the form  $y=ax^2+b/x$

X	1	2	3	4	<i>Ans: <math>0.51 x^2 - 2/x</math></i>
Y	-1.51	0.99	8.88	7.66	