

EE202 Numerical Methods for Engineers  
Laboratory Assignment: 8

\*\* Find solutions of the following questions in Matlab:

Question 1:

Solve following problem by using FEM  $-\frac{d^2u}{dx^2} - u = x^2$  with  $u(0)=0, u(1)=1$ , by using step size of  $h=0.25$  for  $0 \leq x \leq 1$ .

Question 2:

Solve following problem by using FEM  $-\frac{d^2u}{dx^2} - 2u = x^2$  with  $u(0)=0, u(1)=1$ , by using step size of  $h=0.25$  for  $0 \leq x \leq 1$ .