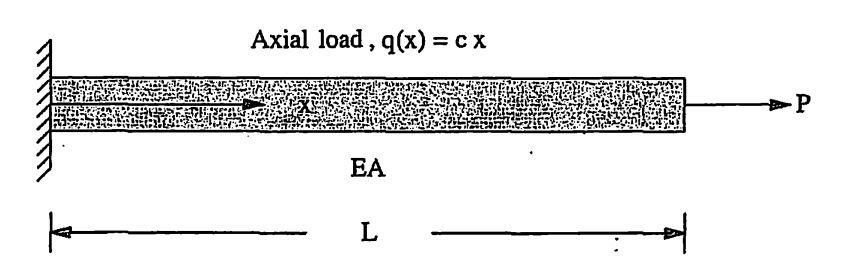
**Assignment -1**

1. Solve

Boundary Conditions at and at

Solve using a) Point Collocation b) Sub-domain c) Galerkin and d) Least square approaches and compare the results.

**Assignment -2**



1. The governing equation for the uniform axially loaded bar is given as

Boundary Conditions at and at

The potential Energy for the Bar is given as

1. Solve the problem by using the Rayleigh Ritz method assuming a Linear, Quadratic and Cubic trial solution (Hint: The linear solution is of the form ).
2. Solve the Problem using the Galerkin method both in Strong and Weak formulation and compare the results with those obtained in part a.
3. Write a computer code that will Solve the following using the Galerkin method (Use the weak form) assuming a Linear, Quadratic and Cubic trial solution

Boundary Conditions at and , Compare the results.

1. Write the weak formulation for the following Differential Equation (You do not have to solve it).

Boundary Conditions

1. Write a computer code that will solve the PDE in Question 1 of Assignment 1 using the Galerkin weak form approach. Assume a Quadratic, Cubic, Fourth and order solutions and compare the results. Compare the error in both the solution and