ELIZADE UNIVERSITY
Pragmatic Innovation for Development

FACULTY: ENGINEERING
DEPARTMENT: CIVIL ENGINEERING
FIRST SEMESTER EXAMINATION (MARCH 2017)
2016/2017 ACADEMIC SESSION

Course Title: Structural Analysis I

Course Code: CVE 405

HOD'S SIGNATURE

Instructions:

1) Attempt any four Questions

2) Time Allowed: 3 hours

3) SEVERE PENALTIES APPLY FOR MISCONDUCT, CHEATING, POSSESSION OF UNAUTHORIZED MATERIALS DURING EXAM

ELIZADE UNIVERSITY, ILARA – MOKIN
FACULTY OF ENGINEERING
DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING
First Semester 2016/2017 Session

Course Title: **Structural Analysis**   Course Code: **CVE 405**   Units: **3**

Instruction: **Attempt any four Questions**   Time Allowed: **3 hours**

Question 1 (15 marks)

Figure Q1 is a structure with uniformly distributed load (30 KN/m) and a point load (50 KN) as indicated. The length of the beam is in meters as shown. Calculate the moments and reactions in the continuous beam as shown in Figure Q1 using energy strain method. EI is constant
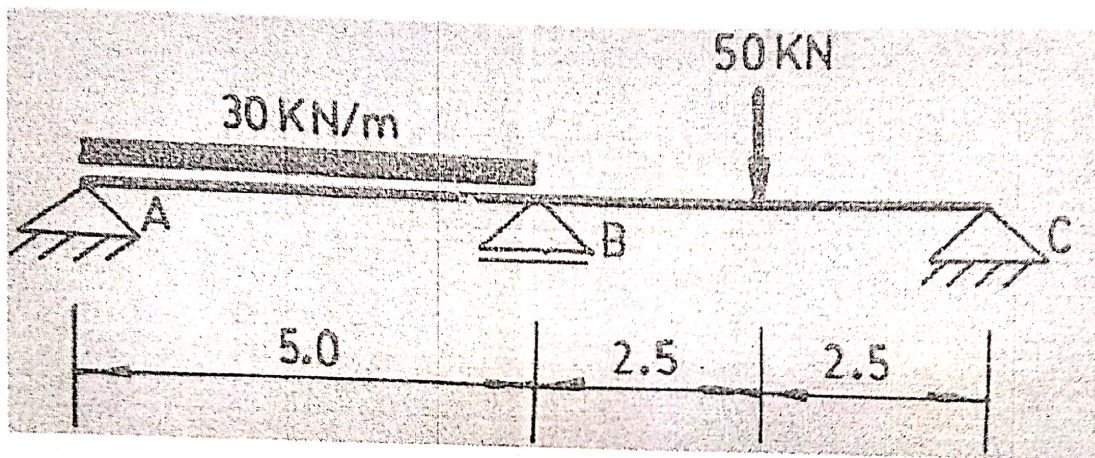

Figure Q1: A beam with a uniformly distributed load and a point load

Question 2 (15 marks)

Figure Q2 is a continuous beam with uniformly distributed loads and a point load as presented. Calculate the moments and reactions in the continuous beam as shown in Figure Q2 using moment distribution method. EI is constant
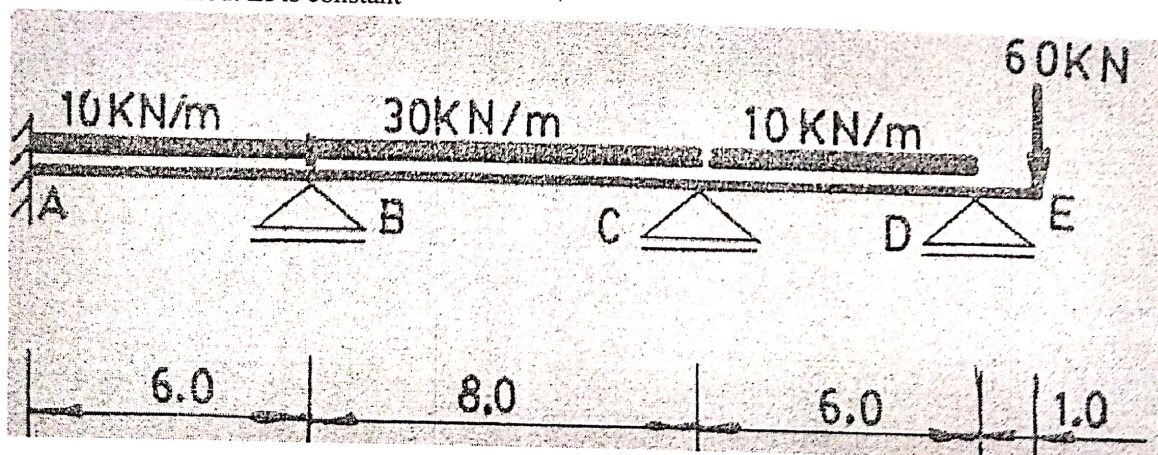

Figure Q2: A continuous beam with uniformly distributed loads and a point load

Question 5 (15 marks)

Figure Q5 is a frame with two point loads as presented. Calculate the moments and reactions in the continuous beam as shown in Figure Q5 using energy strain method. EI is constant
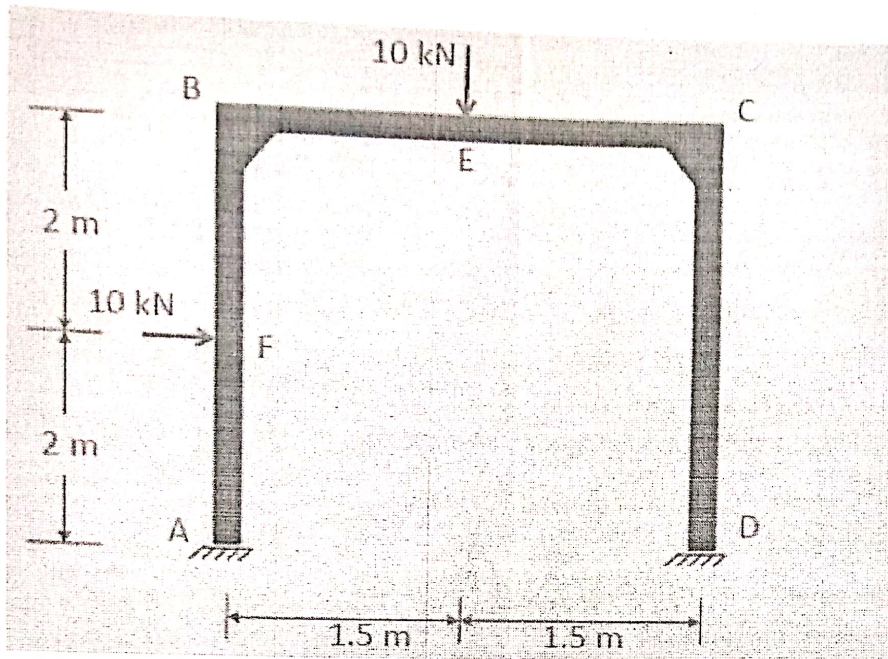

Figure Q5 : A frame with two point loads

Question 6 (15 marks)

Figure Q6 is a frame with uniformly distributed load as presented. Calculate the moments and reactions in the frame as shown in Figure Q6 using moment distribution method. EI is as indicated on the members.
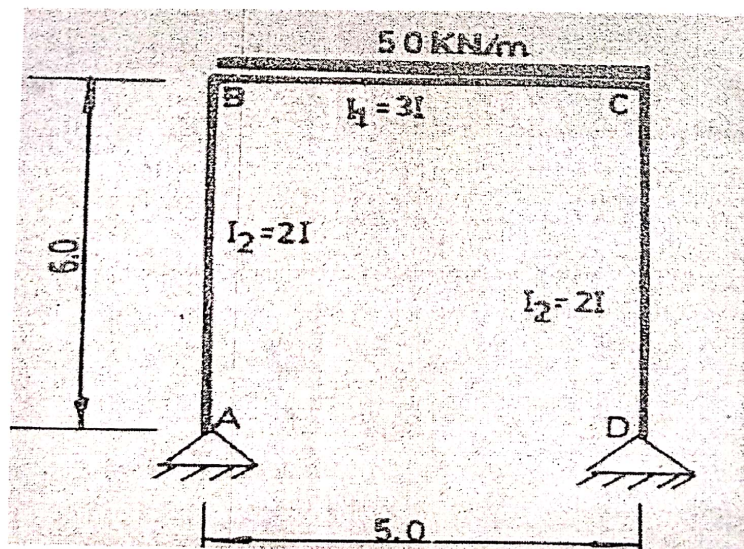

Figure Q6: A frame with uniformly distributed load