DEPARTMENT OF CIVIL ENGINEERING
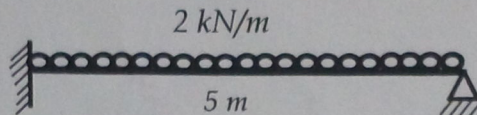## STRUCTURAL ANALYSIS-II (CEL331)
MINOR EXAMINATION-I

Date: 29/08/14   Time Allowed: 01 Hour   Max. Marks = 30

Q#1: Using Slope-Deflection method, compute the fixed end moment of the proposed cantilever of span 5m subjected to a uniformly distributed load of 2 kN/m. Assume that flexural rigidity (EI) for the beam is constant. (04 Marks)
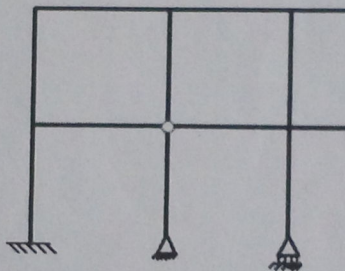

2 kN/m

5 m

Q#2: Determine the <u>stability</u>, degree of static indeterminacy, and degree of kinematic indeterminacy of the following structures. Assume frame members are inextensible.   (06 Marks)
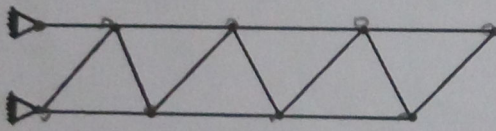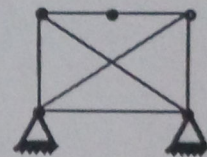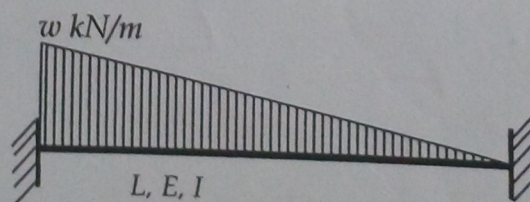

(i)   (ii)   (iii)

Q#3: Using the Method of Consistent Deformations, determine the end moments and reactions of a fixed-ends beam subjected to a triangular loading of "w" kN/m, as shown in Figure 1. Draw SFD and BMD for this structure.   (20 Marks)

w kN/m

L, E, I

(Figure 1)