Ministry of Higher Education Giza Higher Institute for Eng. & Tech.

Civil Engineering Department

Course Name: Theory of Structures (4)

Course Code: CIV 302



Academic Year: 2013-2014

Semester : **Second** Level : **3**rd

Time: --- Hours Date: 5/5/2014

Examiner: Dr. M. Abdel-Kader

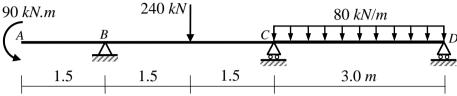
رقم الكود: الاسم:

امتحان منتصف الترم - The Exam consists of 2 questions in 2 pages.

Question (1): (10 Marks)

Using the three-moments equation, draw the shear force and bending moment diagrams for

the shown beam

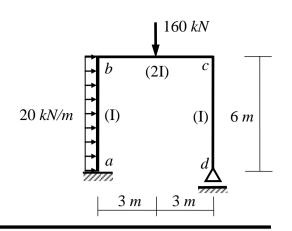


Solution of Question (1)

Question (2): (10 Marks)

For the shown frame with variable moment of inertia, using the **Consistent Deformations** (**Virtual Work**) method, draw the bending moment diagram due to the given loads.

E is constant. The relative moments of inertia are given between brackets.



Solution of Question (2)