Ministry of Higher Education
Giza Higher Institute for Eng. & Tech.
Civil Engineering Department
Course Name: **Theory of Structures (3)**
Course Code : **CIV 301**

Academic Year : **2015–2016**
Semester : **First**
Level : **3rd**
Time : **1½ Hours**
Date : **22 / 11 / 2015**
Examiner: *Dr. M. Abdel-Kader*

Mid-Term Exam

- Attempt all questions.
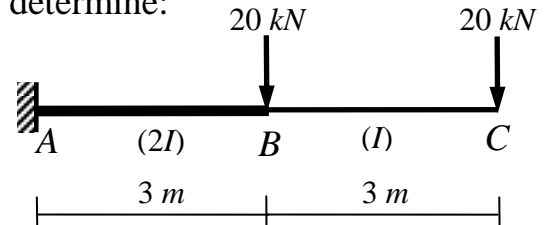- The Exam consists of **2** questions in **1** page.
- Maximum grade is **20 Marks**

Question (1): (10 Marks)

For the shown beam, using the **moment-area method**, determine:
   (a) the deflection at *B*
   (b) the slope at *C*
   (c) the deflection at *C*
and sketch the elastic curve of the beam.

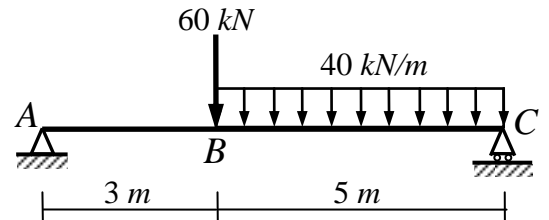$EI = 90.0 \times 10^6 \ N.m^2$

Question (2): (10 Marks)

For the shown beam, using the **conjugate beam method**, determine:
   (a) the slope at *A*
   (b) the slope at *B*
   (c) the deflection at *B*
and sketch the elastic curve of the beam.

$E = 200 \ GPa$
$I = 290 \times 10^6 \ mm^4$

With my best wishes
Dr. M. Abdel-Kader