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 : **2016–2017**
Semester : **First**
Level : **3rd**
Time : **1½ Hours**
Date : **20 / 11 / 2016**
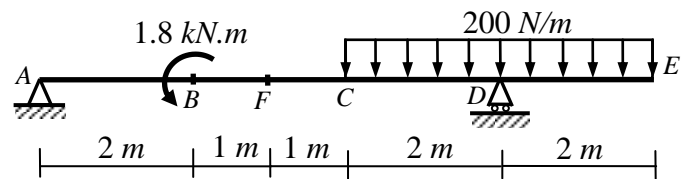Examiner: *Dr. M. Abdel-Kader*

Mid-Term Exam

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

Question (1): (10 Marks)

Using the **double integration method**, determine the deflections at *E* and *F* for the beam loaded as shown, and sketch the elastic curve of the beam. $EI = 100000 \ N.m^2$

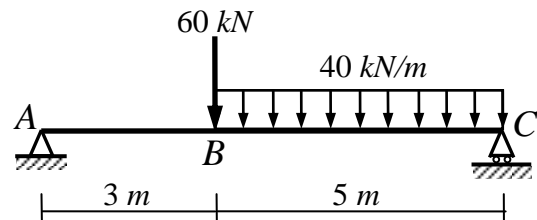## Question (2): (10 Marks)

For the shown beam, using the **moment-area 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