

### Mid-Term Exam

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

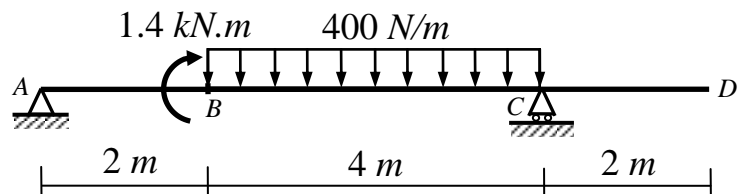
#### **Question (1): (12 Marks)**

For the shown beam, using the **double integration method**, determine:

- (a) the deflection at *B*
- (b) the deflection at *D*
- (c) the slope at *D*

and sketch the elastic curve of the beam.

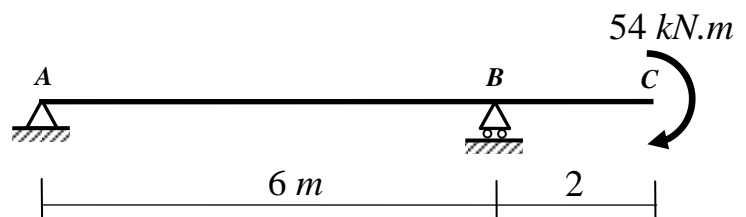
$$EI = 0.45 \times 10^6 \text{ N.m}^2$$



#### **Question (2): (8 Marks)**

For the shown beam, using the **moment-area method**, determine the deflection at the right end *C* and sketch the elastic curve of the beam.

$$EI = 0.45 \times 10^6 \text{ N.m}^2$$



*With my best wishes*

**Dr. M. Abdel-Kader**