



**PRESIDENCY UNIVERSITY  
BENGALURU**

**SCHOOL OF ENGINEERING**

**SUMMER TERM/MAKE UP END TERM EXAMINATION**

**Semester:** Summer Term 2019

**Date:** 25 July 2019

**Course Code:** CIV 209

**Time:** 2 Hours

**Course Name:** Structural Analysis - II

**Max Marks:** 80

**Program & Sem:** B.Tech (Civil) & V Sem (2015 Batch)

**Weightage:** 40%

**Instructions:**

- (i) Write legibly and draw clear diagrams wherever required.
- (ii) Diagrams to be drawing using a pencil and scale only. Pen diagrams will be penalized.
- (iii) Scientific and non-programmable calculators are permitted.

**Part A**

Answer **all** the questions. **Each** sub question carries **five marks**.

(4 Q x 5 M= 20 Marks)

1. Calculate the Fixed End Moments for the beams shown in figures 1 to 4 below:

a.	<p><b>Figure 1</b></p>	b.	<p><b>Figure 2</b></p>
c.	<p><b>Figure 3</b></p>	d.	<p><b>Figure 4</b></p>

### Part B

Answer **all** the questions. **Each** question carries **Twenty marks**.

(2 Q x 20 M = 40 Marks)

2. Analyse the given frame section in Figure 5 by Kani's Method and draw the Bending Moment Diagram (BMD).

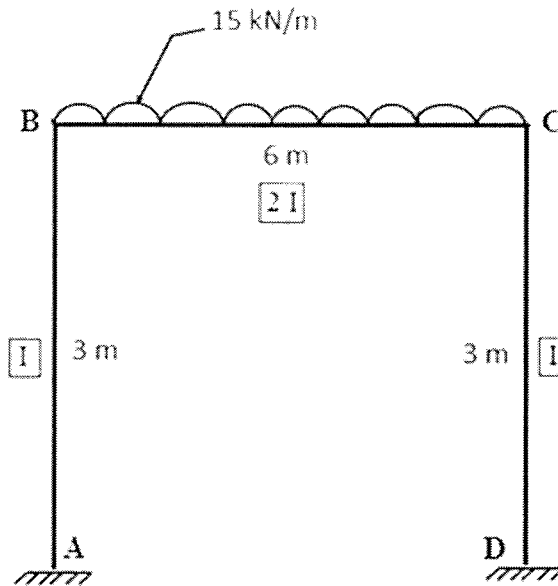


Figure 5

3. Analyse the given continuous beam in Figure 6 by Kani's Method and draw the Bending Moment Diagram (BMD) and Shear Force Diagram (SFD).

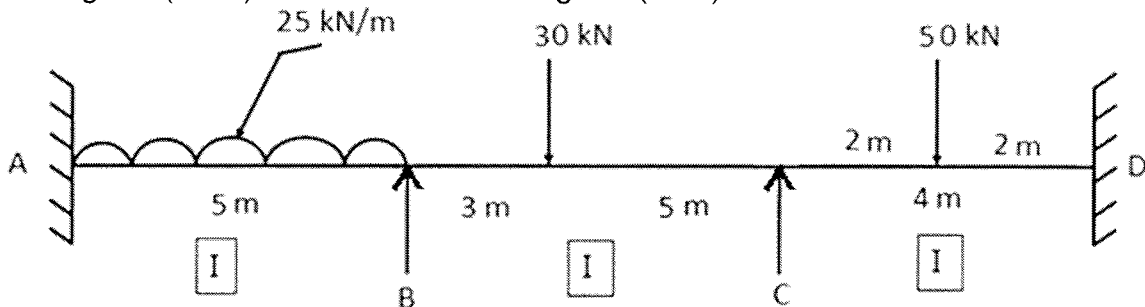


Figure 6

### Part C

Answer the following question. **The** question carries **Twenty marks**.

(1 Q x 20 M = 20 Marks)

4. Analyse the given continuous beam in Figure 7 by slope deflection method and draw the Bending Moment Diagram (BMD) and Shear Force Diagram (SFD).

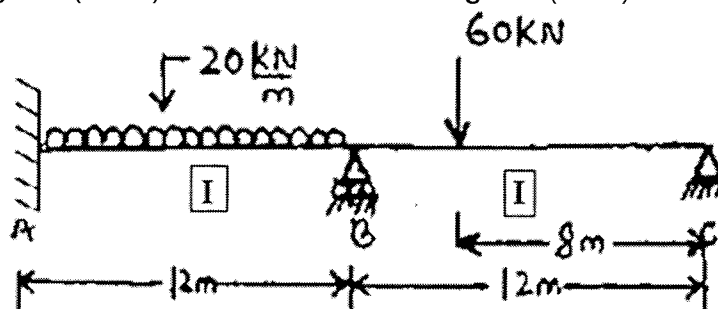


Figure 7