Total No. of Questions : 8]   [Total No. of Printed Pages : 3

Roll No ....

CE-5003 (CBGS)

B.E. V Semester

Examination, November 2018

Choice Based Grading System (CBGS)

Structural Analysis - II

Time : Three Hours

Maximum Marks : 70

Note: i)   Answer any Five questions out of eight questions.

ii) All questions carry equal marks.

iii) Any missing data may be suitably assumed, if any.

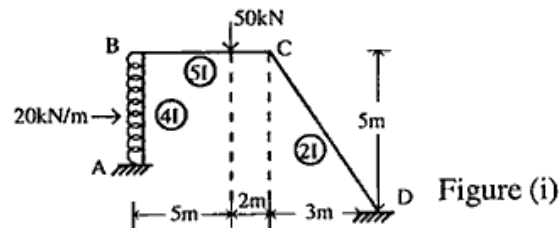1. Analyse the portal frame using by moment distribution method. Draw BMD. (Figure (i))

Figure (i)

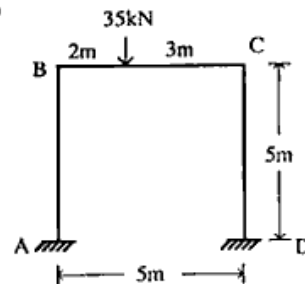2. Analyse the portal frame using by Kani's method. Draw BMD. (Figure (ii))

Figure (ii)

3. Determine the collapse load factor for the two bay portal frame to carry the working loads, if the plastic moment capacity of all members is 15 kNm. (Figure (iii))
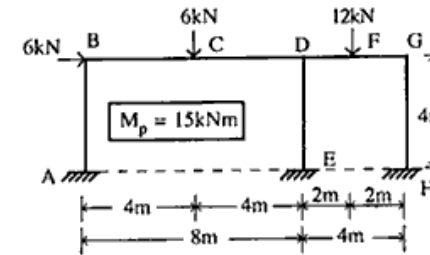
Figure (iii)

4. Find the collapse load for the loaded frame. The plastic moment capacity for beam is M_p and for column $0.80 M_p$. (Figure (iv))
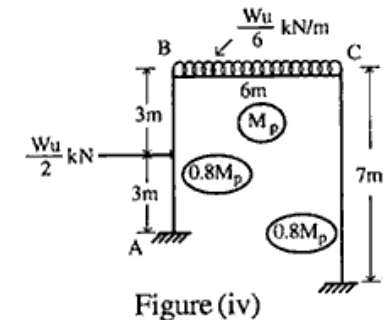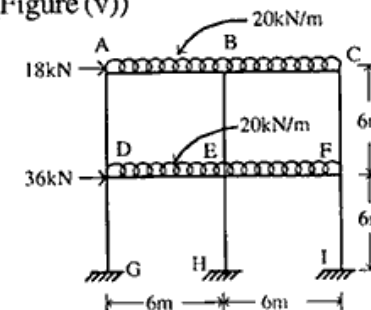
Figure (iv)

5. Analyze the building frame using by portal frame method. Assume points of inflection at 0.1 L for gravity loads. Sketch BMD. (Figure (v))

(Figure (v)

[3]

6. Analyse continuous beam by using flexibility method of matrix if support B sinks by 5mm and EI = 15×10³. Draw BMD. (Figure (vi))
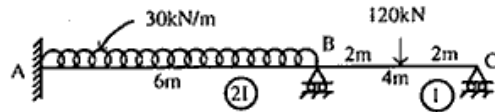

Figure (vi)

7. Analyze the continuous beam by using stiffness method of matrix. Draw BMD. (Figure (vii))
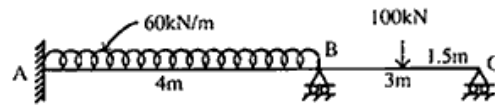

Figure (vii)

8. Determine the equations for the influence lines for shear at E of the following statically indeterminate beam. The load moves from A to D. Draw influence line diagram for shear at E. (Figure (viii))
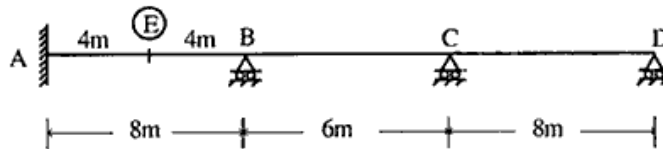

Figure (viii)

******

CE-5003 (CBGS)   178