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

Roll No .....

CE-601 (GS)

B.E. VI Semester

Examination, December 2017

Grading System (GS)

Theory of Structures-II

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.
ii) All questions carry equal marks.

1. Analyse the portal frame shown in Figure 1 by moment distribution method. Draw BMD and sketch the deflected shape of the frame.

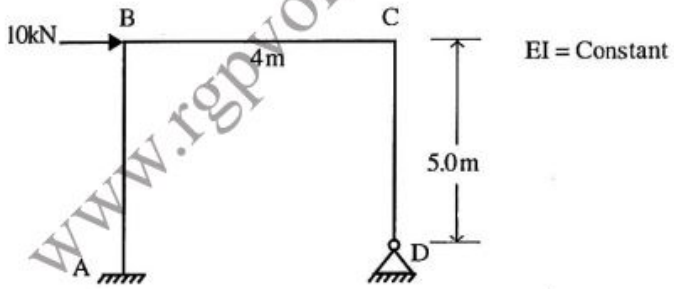

Figure 1

2. Determine the support moments at A, B, C and D for the continuous beam shown in Figure 2 by Kani's method.

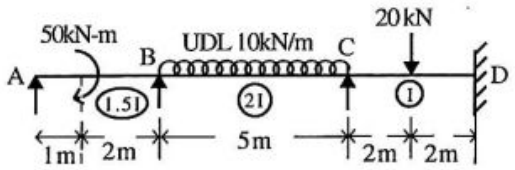

Figure 2

3. Find the value of collapse load for the propped cantilever beam loaded with udl of intensity W/unit length.

4. A portal frame is loaded up to collapse as shown in Figure 3. Find the plastic moment of resistance required if it is of uniform section throughout.

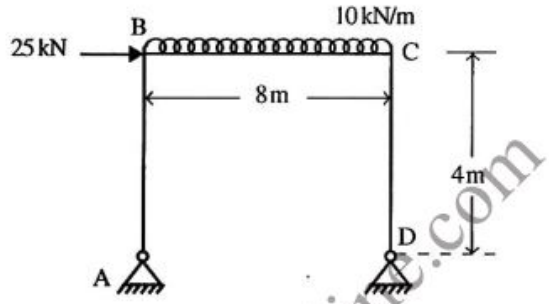

Figure 3

5. Analyse the frame shown in Figure 4 by portal method.

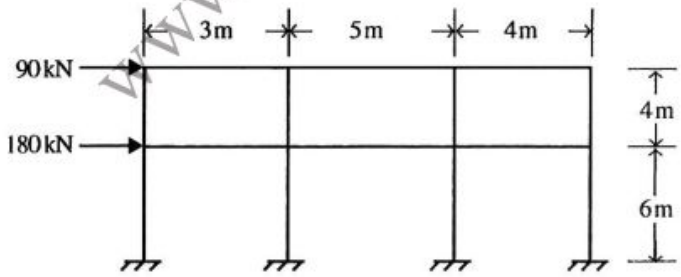

Figure 4

6. Analyse the frame shown in Figure 4 by cantilever method.

[3]

7. Analyse the continuous beam shown in Figure 5 by flexibility matrix method.

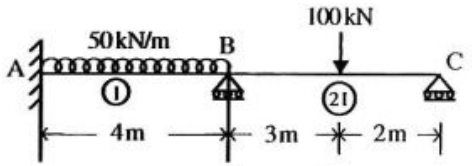

Figure 5

8. Answer any four of the following:
   a) Discuss advantages and disadvantages of Kani's method.
   b) Discuss general theorems for determination of collapse loads.
   c) Discuss codal provisions for lateral loads.
   d) Derive relationship between flexibility and stiffness matrices.
   e) State and explain Muller-Breslau principle.
   f) State the influence line diagram and its advantages.

******

405