09ENG4.5

Fourth Semester B.Arch. Degree Examination, June/July 2015
Structures – IV

Time: 3 hrs.   Max. Marks:100

Note: *1. Answer any FIVE full questions.*
2. Missing data, if any, may be suitably assumed.

1   Analyse the beam shown in Fig.Q1 and draw SFD and BMD.   (20 Marks)

Fig.Q1
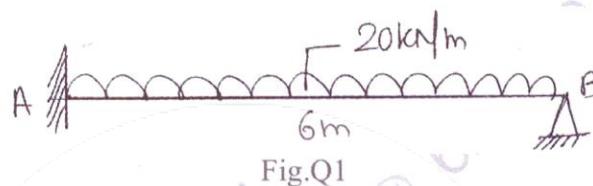
2   Analyse the fixed beam shown and draw SFD and BMD. Refer Fig.Q2.   (20 Marks)

Fig.Q2
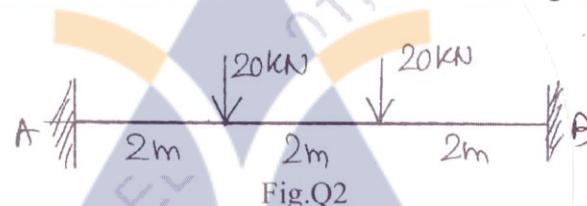
3   a. Analyse the beam and draw only BMD. Refer Fig. Q3(a).   (10 Marks)
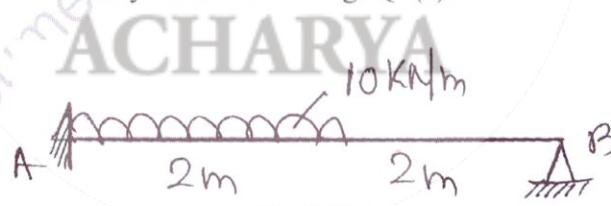
Fig.Q3(a)

b. Determine redundant "M_B" and "V_B" at 'B', for the beam shown in Fig. Q3(b).   (10 Marks)

Fig.Q3(b)
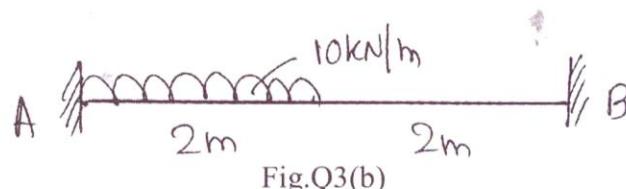
4   Analyse the continuous beam shown in Fig. Q5 by three moment theorem. Draw BMD and SFD.   (20 Marks)
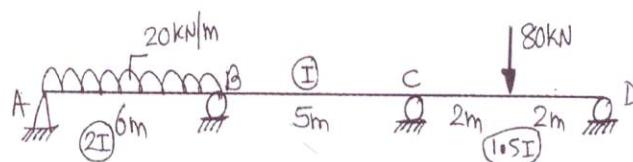
Fig.Q4

5   Analyse the continous beam shown in Fig. Q5 by three moment theorem. The support 'C' sinks by 10 mm. Take EI = 8000 kN-m². Draw BMD and SFD.   **(20 Marks)**

Fig.Q5
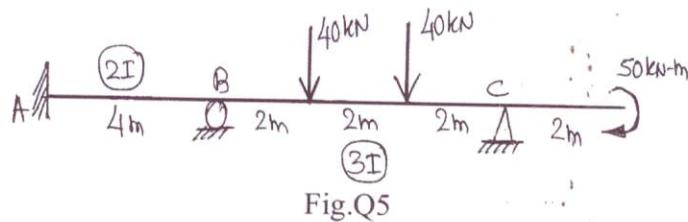
6   Analyse the continous beam shown in Fig. Q6 by M.D. method. Draw BMD and SFD.   **(20 Marks)**
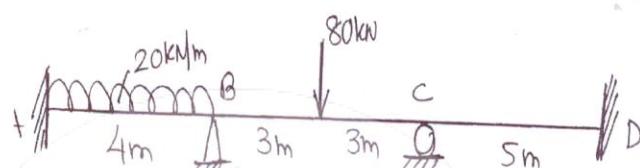
Fig.Q6

7   Analyse the frame shown in Fig.Q7 by M.D. method and draw only BMD.   **(20 Marks)**

Fig.Q7
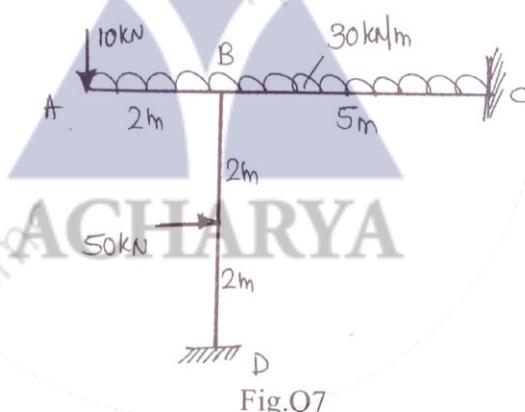
8   Analyse the portal frame shown in Fig. Q8 by M.D, method and draw only BMD.   **(20 Marks)**

Fig.Q8

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