

USN

--	--	--	--	--	--	--	--	--	--

09ENG4.5

**Fourth Semester B.Arch. Degree Examination, Dec.2016/Jan.2017
Structures - IV**

Time: 3 hrs.

Max. Marks:100

Note: Answer FIVE full questions.

- 1 a. Define determinate and indeterminate structures. (04 Marks)
- 2 b. Analyse the propped cantilever beam shown in Fig Q1 (b). Draw SFD and BMD. (16 Marks)

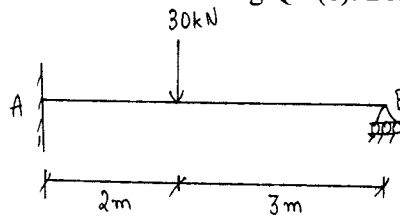


Fig Q1(b)

- 2 a. Determine the degree of indeterminacy for propped cantilever beam and fixed beam. (04 Marks)
- b. Analyse the fixed beam shown in Fig Q2 (b). Draw SFD and BMD. (16 Marks)

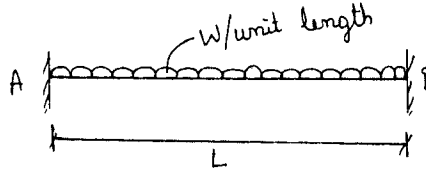


Fig Q2(b)

- 3 Analyse the continuous beam shown in Fig Q3 by three moment theorem. Draw SFD and BMD. $EI = \text{constant}$. (20 Marks)

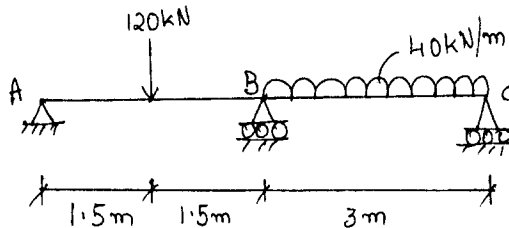


Fig Q3

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

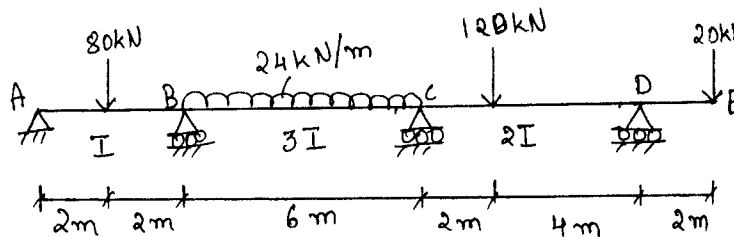


Fig Q4
1 of 2

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any remaining of identification, appeal to evaluate and set questions within eg. 12, 8, 56, will be treated as unfair practice.

- 5 Analyse the continuous beam shown in Fig Q5 by three moment theorem. Draw BMD.

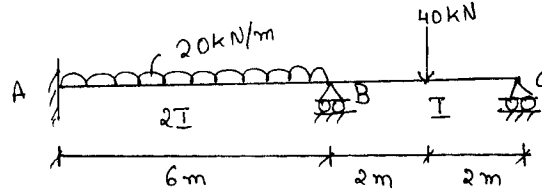


Fig Q5

(20 Marks)

- 6 Analyse the beam shown in Fig Q6. by moment distribution method. Draw SFD and BMD.

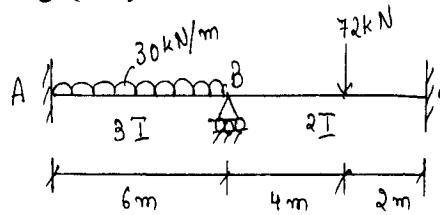


Fig Q6

(20 Marks)

- 7 Analyse the beam shown in Fig Q7 by moment distribution method. Draw BMD.

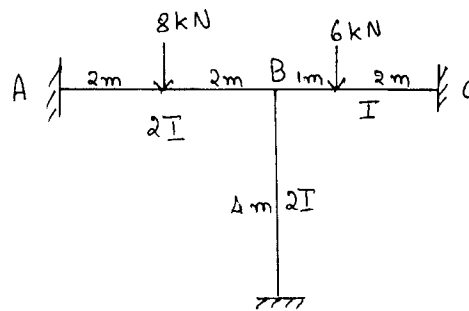


Fig Q7

(20 Marks)

- 8 Analyse the portal frame by moment distribution method shown in Fig Q8. Draw BMD.

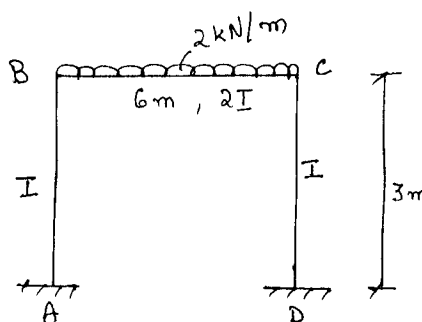


Fig Q8
