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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)

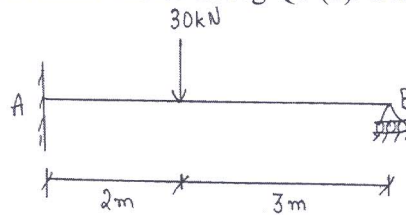


Fig Q1(b)

- 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)

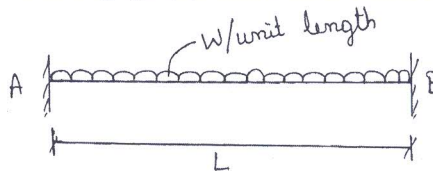


Fig Q2(b)

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

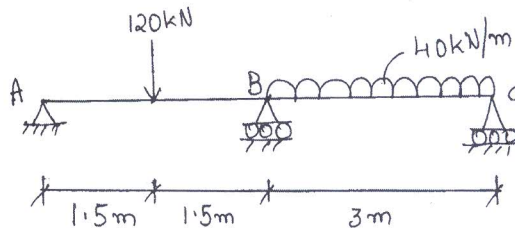


Fig Q3

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

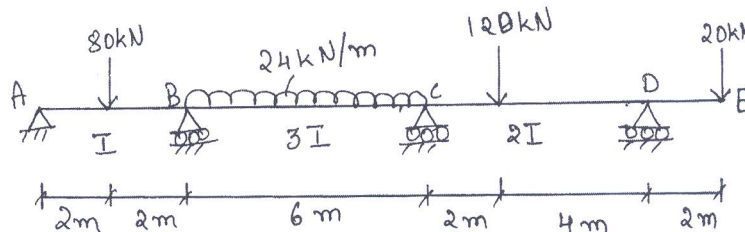


Fig Q4

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.

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

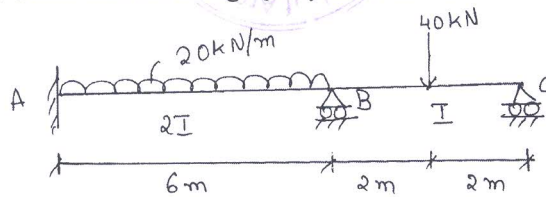


Fig Q5

(20 Marks)

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

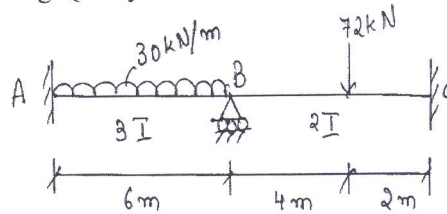


Fig Q6

(20 Marks)

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

(20 Marks)

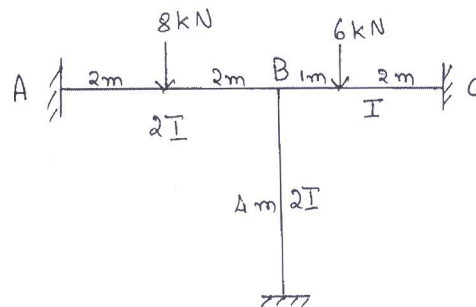


Fig Q7

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

(20 Marks)

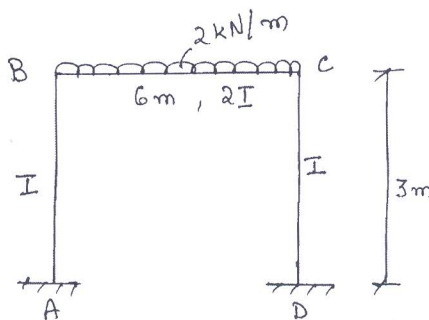


Fig Q8
