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Fourth Semester B.Arch. Degree Examination, June / July 2014
Structures – IV

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1 a. Define statically determinate structures and statically indeterminate structures with example. (08 Marks)
- b. Analyse propped Cantilever beam shown in Fig. Q1 (b). Draw SFD and BMD. (12 Marks)

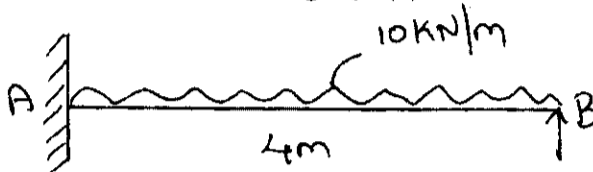


Fig. Q1 (b)

- 2 a. Discuss advantages and disadvantages of fixed beam. (04 Marks)
- b. Analyse the fixed beam shown in Fig. Q2 (b) and draw SFD and BMD. (16 Marks)

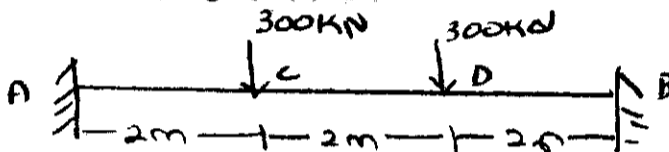


Fig. Q2 (b)

- 3 Analyse the fixed beam and draw SFD and BMD. (20 Marks)

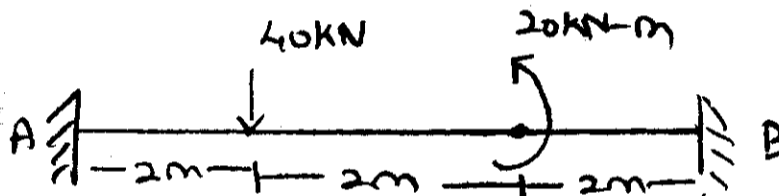


Fig. Q3

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

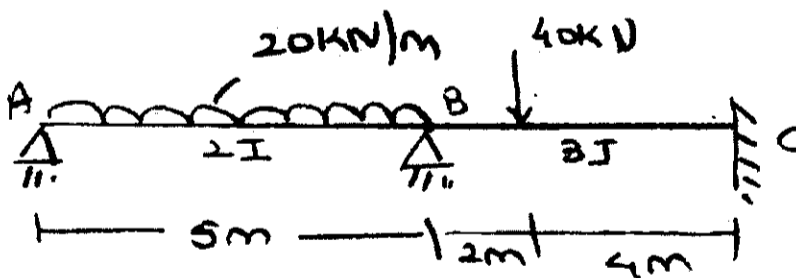


Fig. Q4

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 SFD and BMD. (20 Marks)

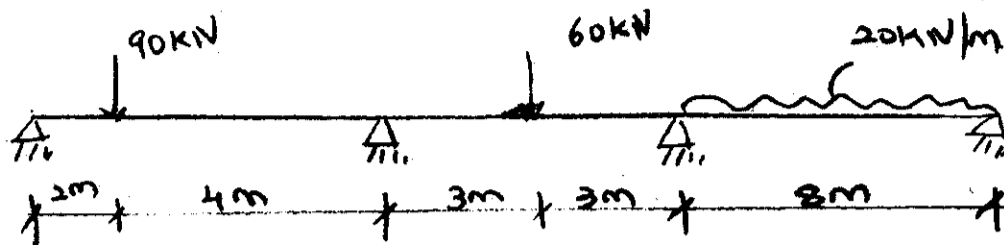


Fig. Q5

- 6 a. Define the term relative stiffness of distribution factor. (04 Marks)
 b. Analyse the continuous beam shown in Fig. Q6 (b) and draw SFD and BMD. Use moment distribution method. (16 Marks)

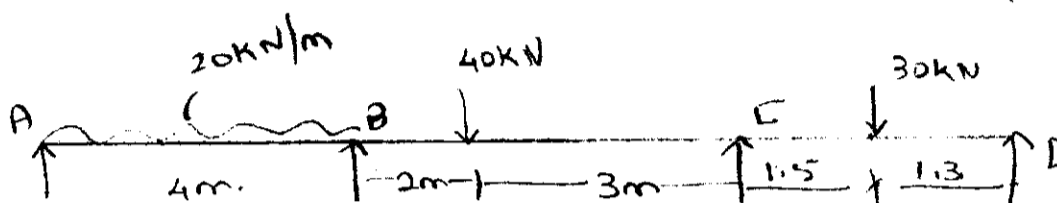


Fig. Q6 (b)

- 7 Analyse the portal frame by moment distribution method. Draw SFD and BMD. (20 Marks)

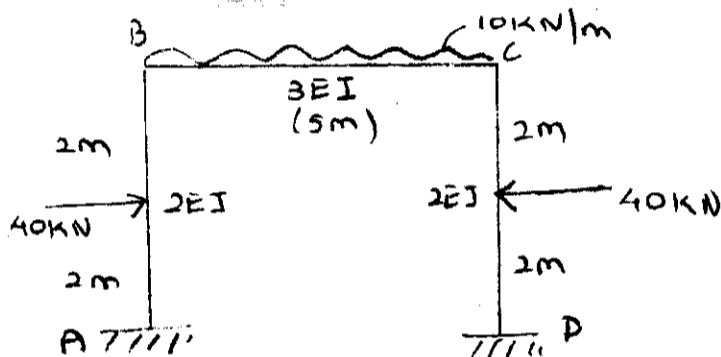


Fig. Q7

- 8 Analyse the portal frame and draw SFD and BMD. (20 Marks)

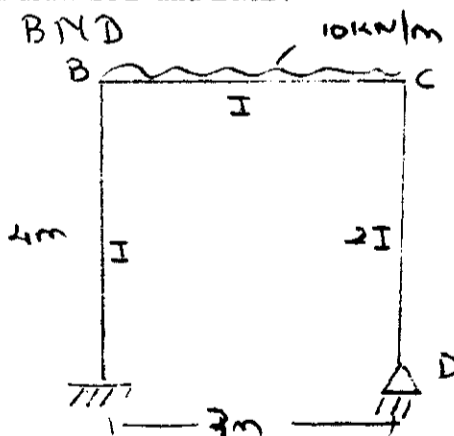


Fig. Q8