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ENG4.5

Fourth Semester B.Arch. Degree Examination, Dec.09-Jan.10
Structures - IV

Time: 3 hrs. Max. Marks:100

Note: ***1. Answer any FIVE full questions.***
2. Any missing data may be suitably assumed.

1 a. Distinguish between statically determinate and indeterminate structures with examples. **(05 Marks)**

b. A propped cantilever beam is loaded as shown in Fig.1. Analyse the beam and draw SFD and BMD. Mark salient points on the diagrams. **(15 Marks)**

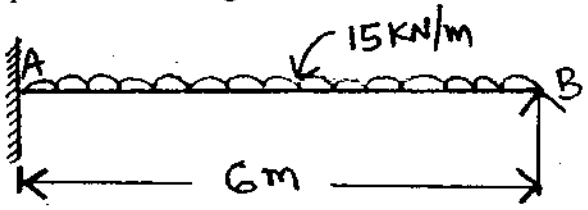

Fig. 1

2 a. State the advantages and disadvantages of fixed beams. **(05 Marks)**

b. Determine the fixed end moments developed for the beam shown in Fig.2. **(15 Marks)**

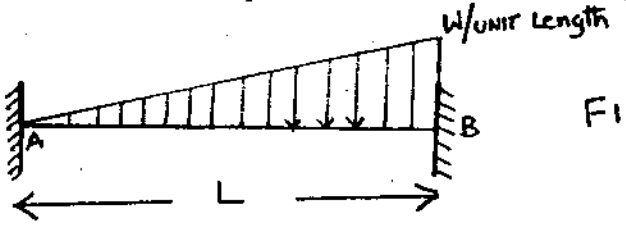

Fig.2

3 Analyse the fixed beam shown in Fig.3 and draw the BMD and SFD.

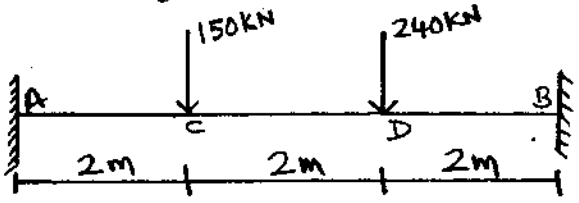

Fig.3

(20 Marks)

4 Analyse the continuous beam shown in Fig.4 by Clayperon's three moment theorem. Draw the BMD and SFD.

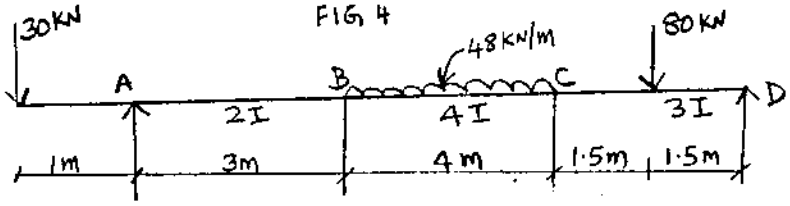

Fig.4

(20 Marks)

5 Analyse the continuous beam shown in Fig.5 by theorem of three moments. Also draw the BMD and SFD.

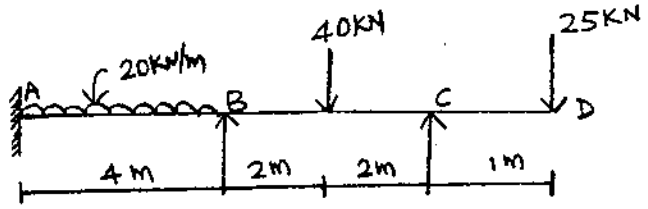

Fig.5

(20 Marks)

6 Using moment distribution method, analyse the continuous beam shown in Fig.6. Also draw BMD and SFD.

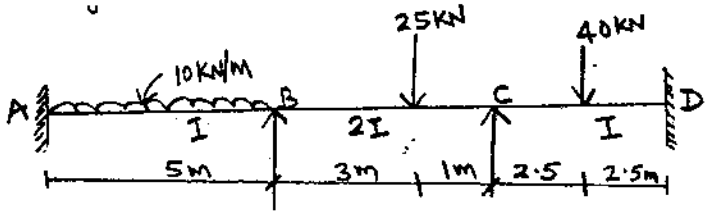

Fig.6

(20 Marks)

7 Analyse the continuous beam shown in Fig.7 by moment distribution method. Also draw the SFD and BMD.

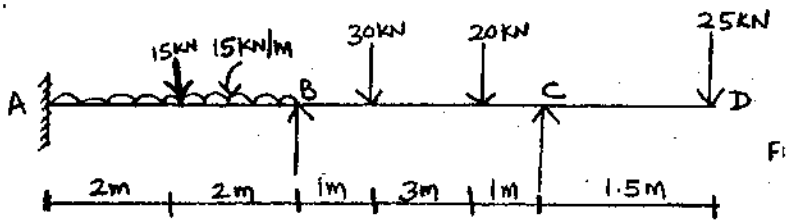

Fig.7

(20 Marks)

8 Analyse the loaded structure shown in Fig.8 by moment distribution method and draw the BMD.

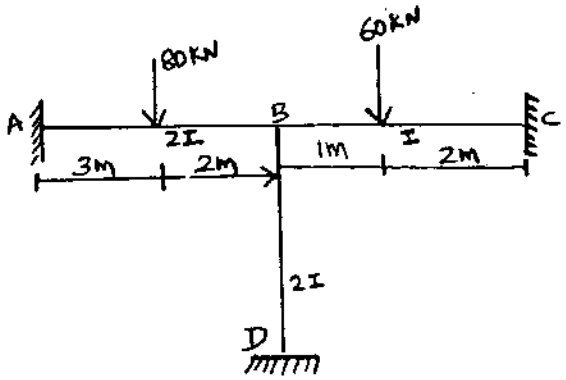

Fig.8

(20 Marks)

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