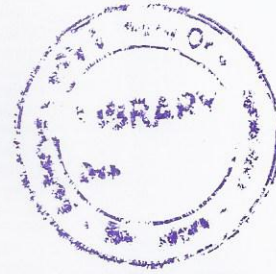


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09ENG4.5

Fourth Semester B. Arch Degree Examination, Dec.2017/Jan.2018
Structures – IV

Time: 3 hrs.

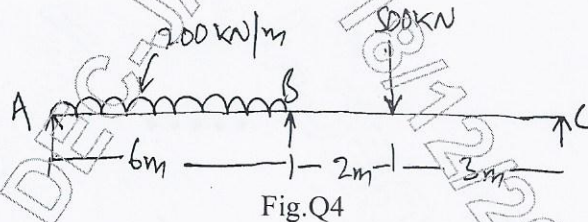
Max. Marks:100

Note: Answer any FIVE full questions.

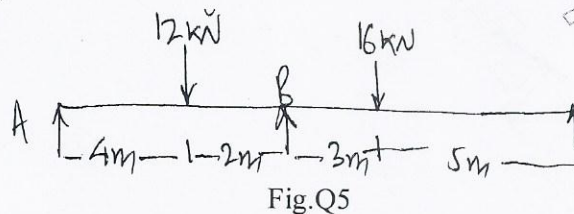
- A cantilever of length 4m carries an udl of 1kN/m run over the whole length. The cantilever is propped rigidly at the free end of the value of $E = 2 \times 10^5 \text{ N/mm}^2$ and $I = 1 \times 10^8 \text{ mm}^4$, then determine :

 - Reaction at the rigid prop
 - The deflection at the centre of the cantilever. (20 Marks)
- A fixed beam AB, 6m long, is carrying a point load of 50 kN at its center. The moment of inertia of the beam is $78 \times 10^6 \text{ mm}^4$ and $E = 2.1 \times 10^5 \text{ N/mm}^2$. Determine :

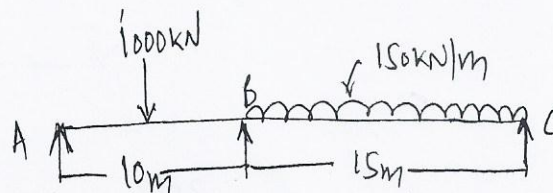
 - Fixed end moments
 - Deflection under the load. (20 Marks)
- A fixed beam of length 6m carries two point loads of 30kN each at a distance of 2m from both ends. Determine the fixed and moments and draw BMD. (20 Marks)
- Analyse the continuous beam shown in Fig.Q4 using three moment equation. Draw BMD and SFD. (20 Marks)



- Analyse the continuous beam shown in Fig.5 using three moment equation. Draw BMD and SFD. (20 Marks)



- Analyse the continuous beam shown in Fig.Q6 using three moment equation. Draw BMD and SFD. (20 Marks)





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- 7 Analyse the continuous beam shown in Fig.Q7 using moment distribution method. Draw BMD. (20 Marks)

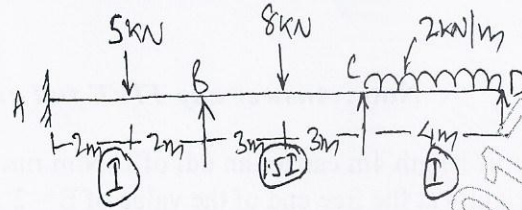


Fig. Q7

- 8 Analyse the portal frame shown in Fig.Q8 using moment distribution method. (20 Marks)

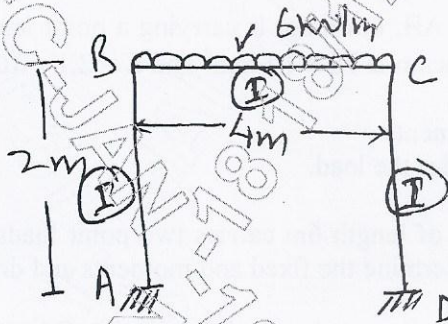


Fig.Q8
