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AR203

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 181203

Roll No.

B. Arch.

(SEM. II) THEORY EXAMINATION, 2014-15

ARCHITECTURAL STRUCTURES - II

Time : **3** Hours] [Total Marks : **50**

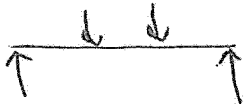
Note :

(i) Attempt any five questions.
(ii) Assume any missing data.
(iii) All Questions carry equal marks.

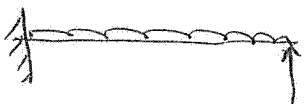
1 (a) Define determinate and indeterminate truss structure with examples.

(b) Determine degree of Redundancy in the following structures.

(i)



(ii)



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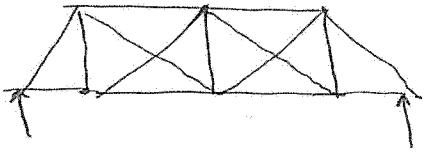
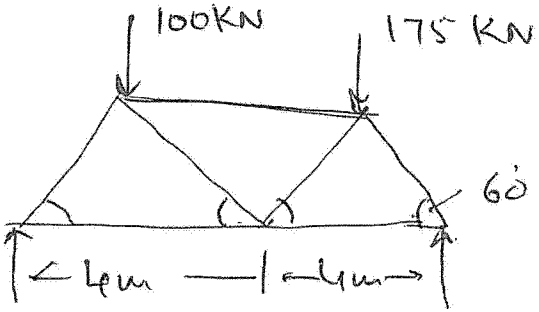
(iii)



(iv)

(v)

2 Determine the forces in the truss given below by analytical or graphical method.



3 Determine the shear stress distribution in a beam of rectangular section with width b and depth d for shear force V.

4 Determine the deflection equation for beam for a bending moment M, and deflection y and beam property EI.

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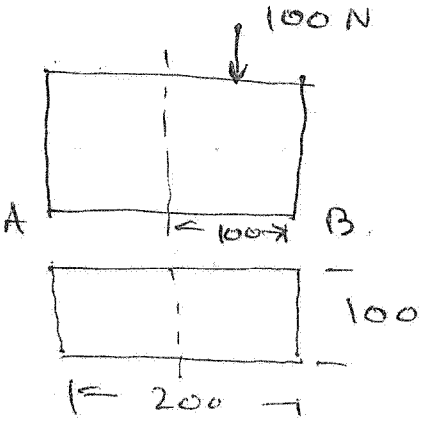
5 Determine the deflection of beam (S.S.) of span L and UDL W by double integration.

6 (a) Define the stresses in a column base for direct and bending loods.

(b) Calculate stresses at A and B for the column shown below.



7 Determine the critical load or buckling load in a column pinned at both ends, of length L and column property EI. Also define slenderness ratio.