S.No. : 370 AR 1203

No. of Printed Pages : 03

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

PAPER ID : 10109 Roll No. | | | | | | | | | | |

B. Arch. Examination 2021-22

ARCHITECTURAL STRUCTURE - II

Time : Three Hours] *[Maximum Marks : 60*

Note :– (i) Draw neat sketches with proper labelling.

(ii) Assume any missing data.

SECTION – A

1. Attempt any eight parts of the following : 8×1=8

(a) The space diagram of a framed structure must have all the ..... .

(b) When a body is subjected to a direct tensile stress (σ) in one plane then the tangential stress on an oblique of the body inclined at an angle (θ) to normal of the section is equal to ..... .

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(c) $M > 2j - 3$, truss is ..... .

(d) For pin jointed frames, joints are analyzed for ..... .

(e) ..... material value of Poisson's ratio is minimum.

(f) Elastic limit of mild steel is ..... .

(g) Rule for combined stress for beam of rectangular cross-section is ..... .

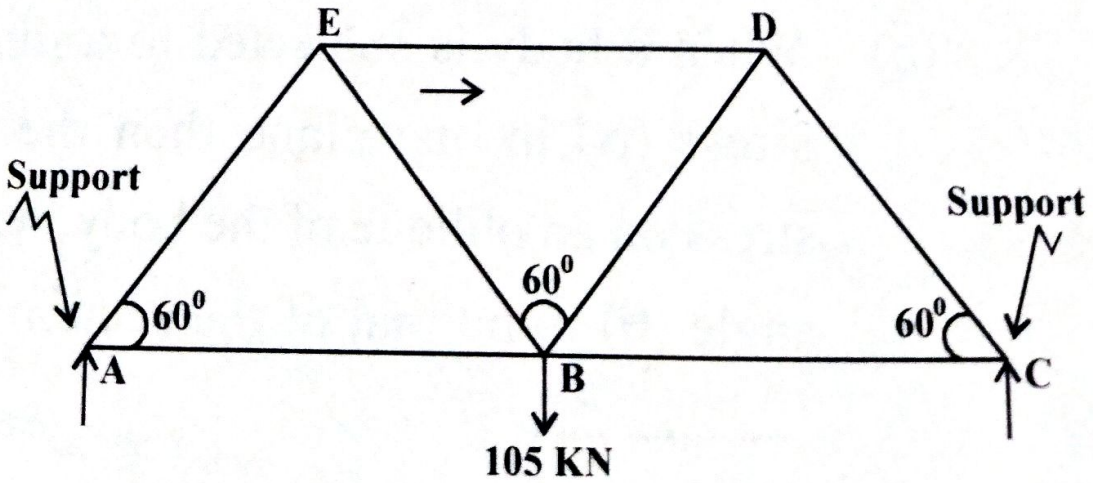
(h) If the bending moment is consistent there will be no ..... stress.

(i) A member under tension is called ..... .

SECTION – B

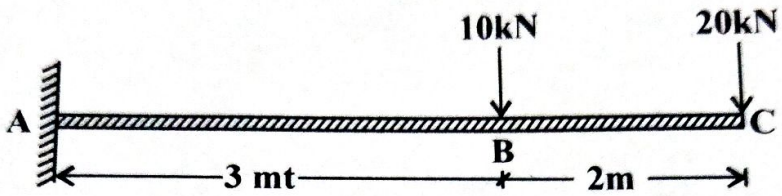
2. Attempt any two parts of the following : 2×6=12

(a) Solve the given figure by method of section method :



(b) Differentiate a between the load bearing walls and framed system of building. Under which conditions you choose framed system of building design?

(c) Find deflection at point "C" :



SECTION – C

3. Attempt any two parts of the following : 2×20=40

(a) What are the various building components which are necessary for proper functioning of any building system?

(b) Explain any type of structural truss system. Briefly explain any method of solving the same member.

(c) A steel rod 5 mt long and of 40 mm diameter is used as a column, with one end fixed and the other free. Determine the crippling load by Euler's formula. Take E as 200 G. Pa.

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