RM-6053

B. Arch. - I (Sem. I) Examination
May / June – 2010
Structural Design & Systems - I
(New Course)

Time : **2** Hours]   [Total Marks : **50**

Instructions :

(1)


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નીચે દર્શાવેલ 👈 નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of 👈 signs on your answer book.
Name of the Examination :
👈| B. Arch. - 1 (Sem. 1)
Name of the Subject :
👈| Structural Design & Systems - I
👈Subject Code No.: 6 0 5 3  👈Section No. (1, 2,.....) : 1&2
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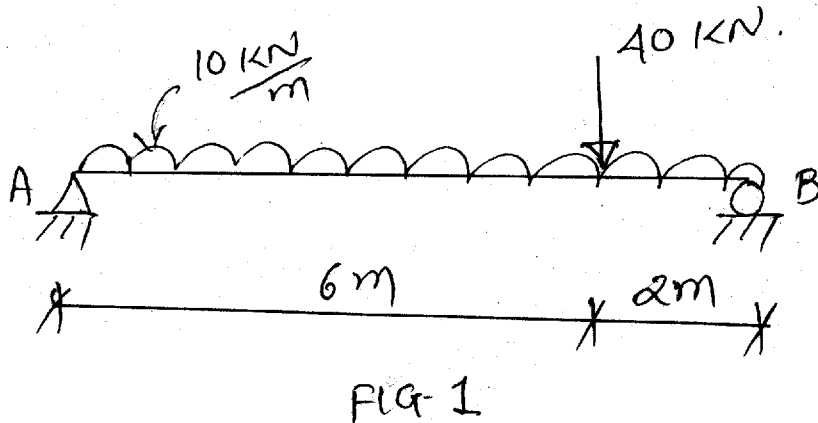
Seat No. :

Student's Signature

(2)   Assume suitable data and specifically mention it.

(3)   Figures to the right indicate full marks.

(4)   Use of nonprogrammable scientific calculator is permitted.

1   Explain following terms by giving proper example.   **8**
Bending, Torsion, Imposed load, Earthquake load.

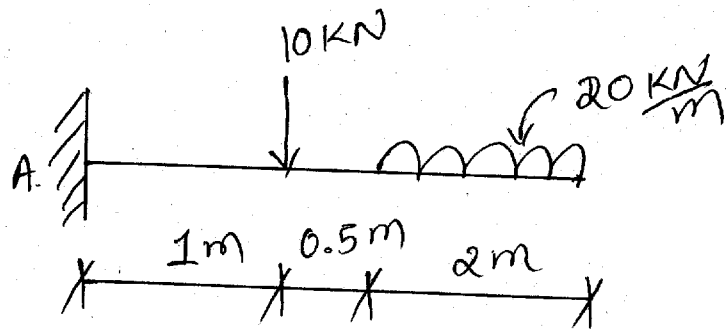**2**   Calculate Reaction of a beam shown in fig 1 or fig. 2.   **10**

FIG-1

10 KN

20 KN/m

A

1 m   0.5 m   2 m

FIG-2

3 Calculate resultant of a given force system. Refer fig. 3   8

Y

40 KN

60°

10 KN

45°

30°

20 KN

50 KN
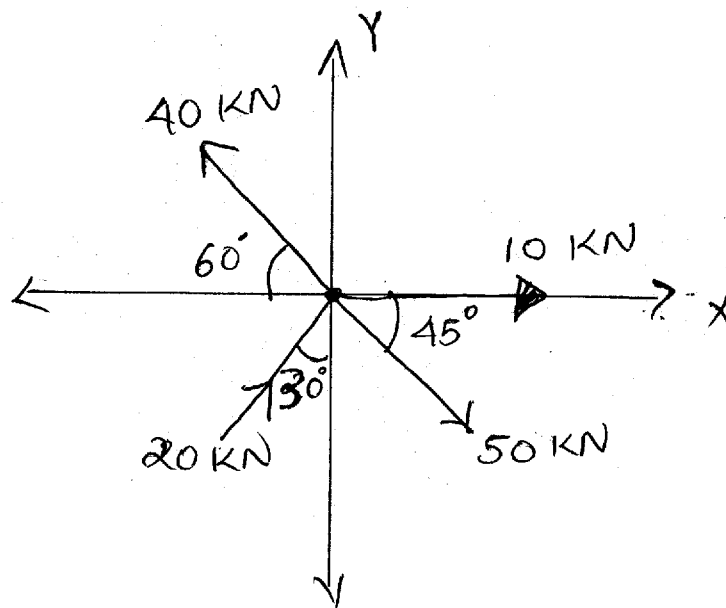
X

Fig. 3

4 Answer following questions :   **10**

   (i)   Explain internal and external determinacy by giving proper examples.

   (ii) Explain stability by giving proper example.

OR

4   Calculate force in members AB and AC, for the force   **10**
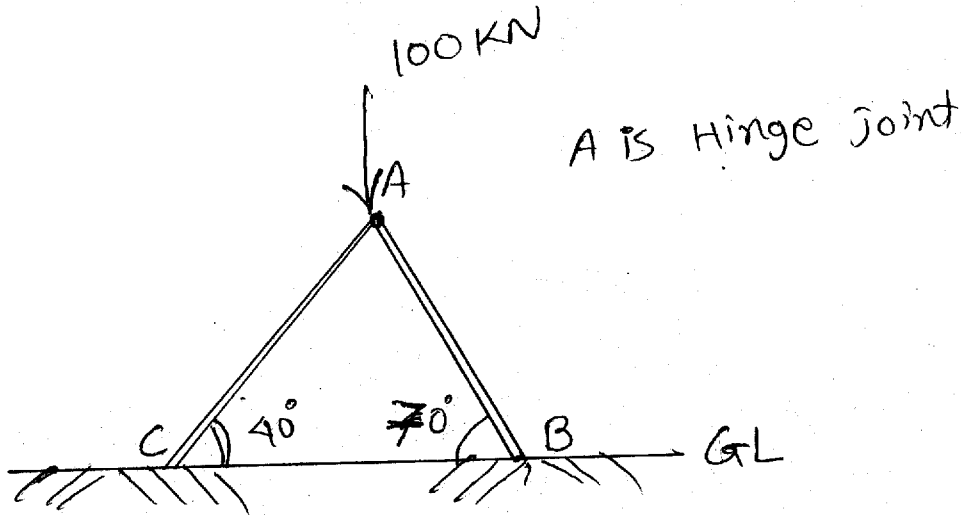   system shown in figure 4.

Fig. 4

5   Solve the truss shown in figure 5, using method of   **14**
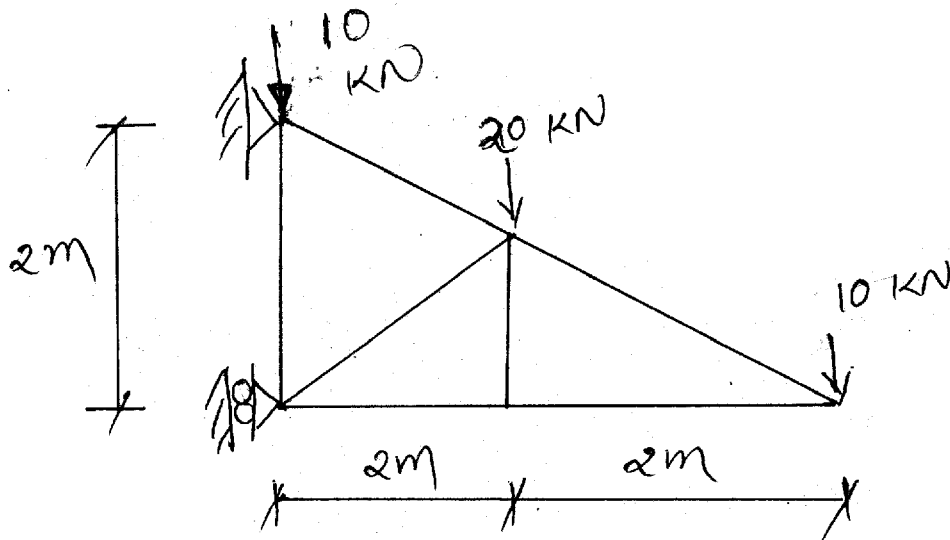   joints or Graphical method and tabulate your result.

FIG-5