* K D - 6 0 4 1 *

KD-6041

B. Arch. - I (Sem. I) Examination

December – 2012

Structural Design & Systems - I

(New Course)

Time : **2** Hours] [Total Marks : **30**

Instructions :

(1)

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 - 1 (NEW)

☛ Subject Code No. : 6 0 4 1 ☛ Section No. (1, 2,.....) : NIL

Seat No. :

Student's Signature

(2) Show sign conventions and mention it.
(3) Assume suitable data and specifically mention it.
(4) Figures to the right indicate full marks.
(5) Use of Nonprogrammable scientific calculator is permitted.

1 Identify supports and calculate reaction of a beam shown in **fig. 1** or **fig. 2**. **7**

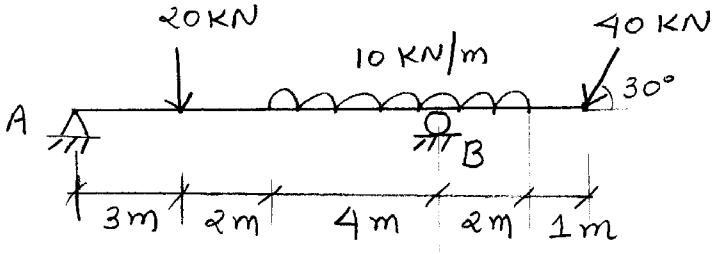

Fig. 1

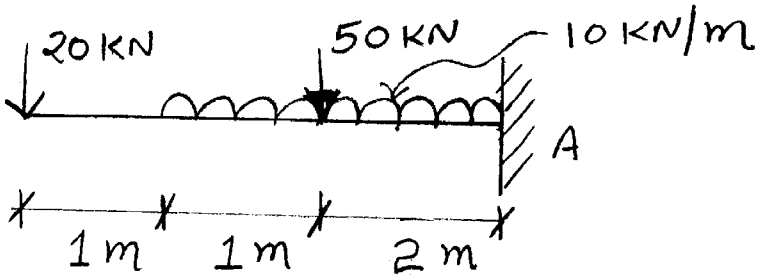

Fig. 2

2 Solve the truss shown in **fig. 3**, using Graphical method OR method of joints and tabulate your result. 8

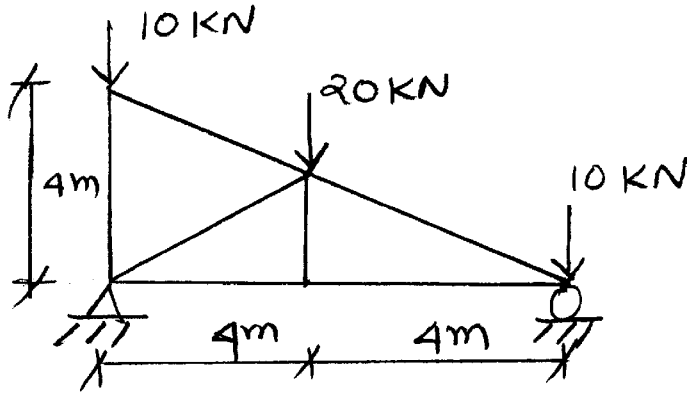

Fig. 3

3 Identify force system and calculate resultant of a given force system shown in **fig. 4** OR **fig. 5**. 6

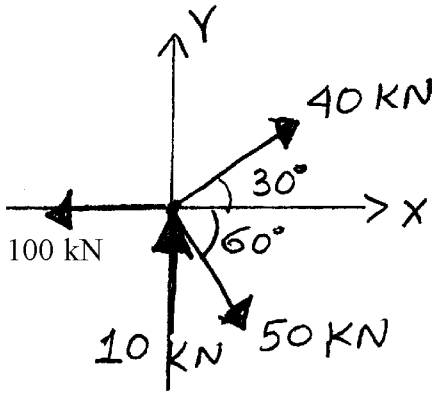

Fig. 4

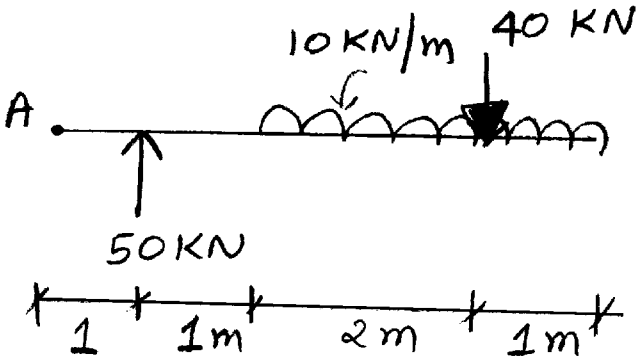

Fig. 5

4 Calculate result of a given force system. Refer **fig. 6**. **6**

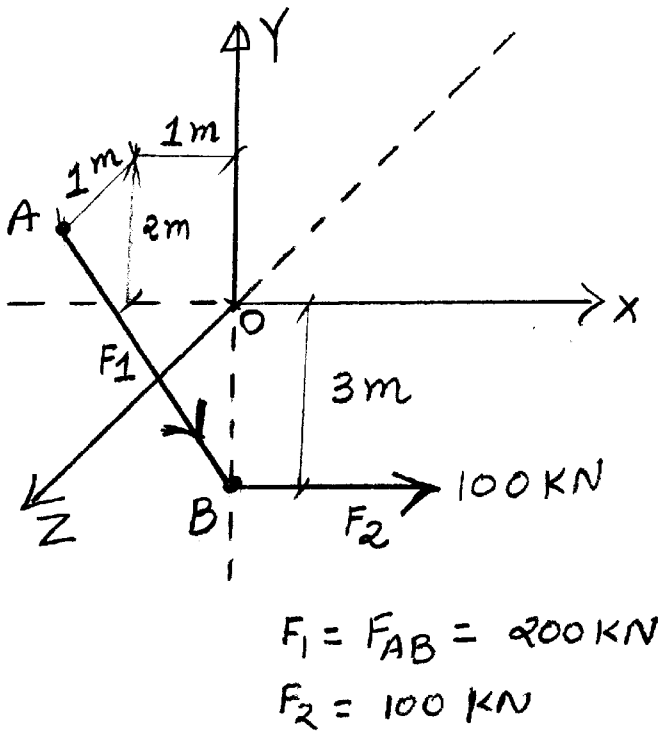

Fig. 6

5 Explain following terms by giving proper example : **3**
(any **three**)

(1) Dynamic load

(2) Point load

(3) Shear

(4) Strength.