Kadi Sarva Vishwavidyalaya

LDRP INSTITUTE OF TECHNOLOGY & RESEARCH, GANDHINAGAR.

B.E. 5th Semester

MID SEM EXAMINATION

Date/Day : 30/08/14 , Saturday **Branch : Civil Engineering**

Subject Name & Code : SA – III (CV-506) **Max. Marks : 30**

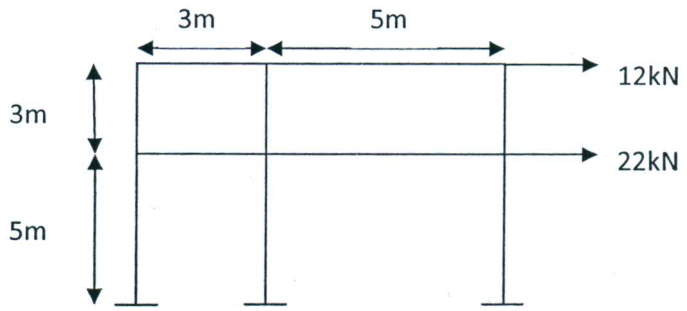
Time : 8:30 Am to 10:00 Am

Instructions: 1) All questions are **compulsory**

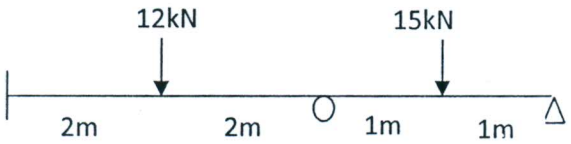
2) Figures to the **right** indicate full marks.

3) Indicate **clearly**, the options you attempt along with its respective question number.

Q.1 (a) Draw SFD for the following figure (By Cantilever Method) [5]



(b) Draw SFD and BMD using stiffness method [5]



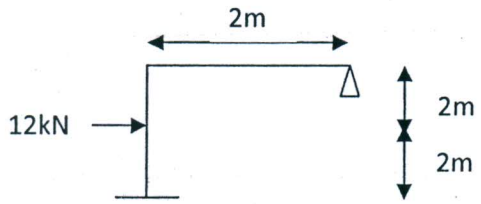
Q.2 (a) Write characteristics of stiffness method. [5]

(b) Calculate support reaction for fixed beam of span 6m carrying 9N load at centre. (Use Stiffness Method) 5

OR

Q.2 (a) Differentiate flexibility method and stiffness method. [5]

(b) Generate stiffness matrix for following figure. [5]



Q.3 (a) Derive equation of Meridonial thrust and Hoop force for spherical dome for UDL. [5]

(b) Differentiate straight beam and curved beam. [5]

OR

Q.3 (a) Calculate Meridonial thrust and Hoop force in spherical dome of span 12m, rise 3m, thickness 0.1m, Live load 4kN/m^2. Density of concrete 25 kN/m^3. (at 5^0 Interval) [5]/10

**************All THE BEST****************