Roll No											

PRESIDENCY UNIVERSITY
BENGALURU

SCHOOL OF ENGINEERING
MID TERM EXAMINATION - APR 2023

Semester : Semester IV - 2021
Course Code : CIV2013
Course Name : Sem IV - CIV2013 - Analysis of Determinate Structures
Program : CIV

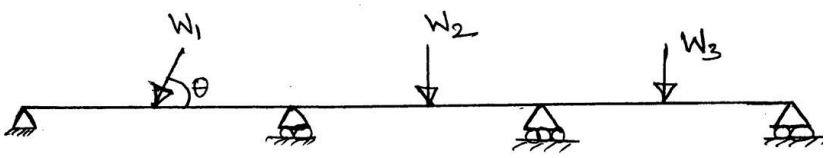
Date : 12-APR-2023
Time : 9.30AM - 11.00AM
Max Marks : 50
Weightage : 25%

Instructions:
(i) Read all questions carefully and answer accordingly.
(ii) Question paper consists of 3 parts.
(iii) Scientific and non-programmable calculator are permitted.
(iv) Do not write any information on the question paper other than Roll Number.

PART A

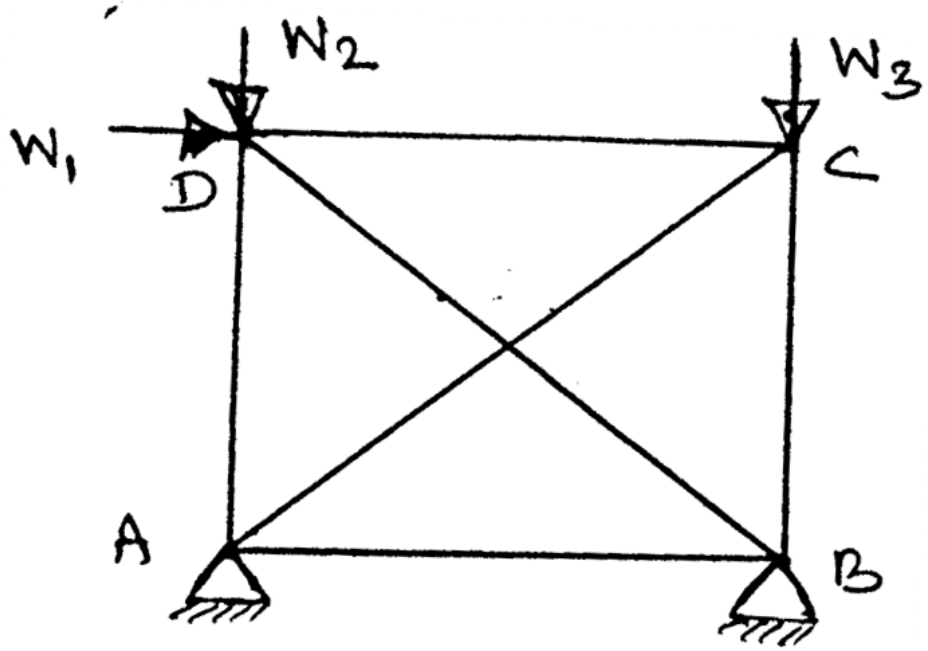
ANSWER ALL THE QUESTIONS **(5 X 2 = 10M)**

1. Degree of Indeterminacy of a continuous beam loaded as shown in the fig is _____



a) 1 (CO1) [Knowledge]
b) 2
c) 4
d) 5

2. The total Degree of Indeterminacy for the truss loaded as shown in Fig is _____



a) 1 (CO1) [Knowledge]

b) 2

c) 4

d) None of the above

3. Number of available conditions of equilibrium for concurrent force system are _____

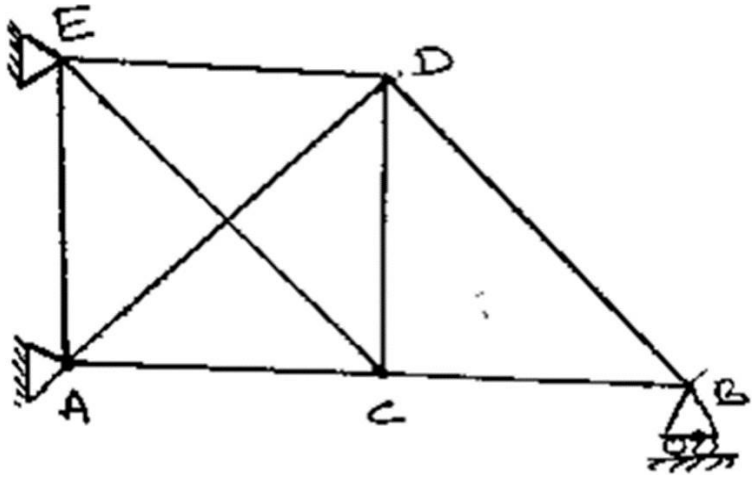
a) 2 (CO1) [Knowledge]

b) 3

c) 6

d) None of the above

4. The Kinematic degree indeterminacy of the truss shown in Fig is _____



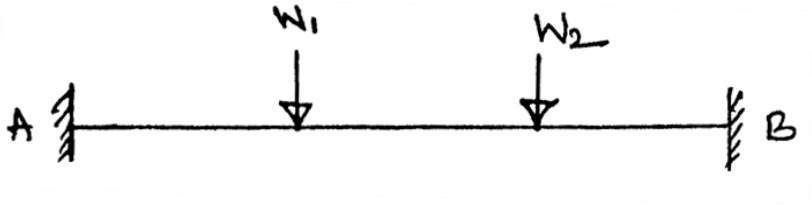
a) 2 (CO1) [Knowledge]

b) 3

c) 4

d) 5

5. The Degree of Indeterminacy for the fixed beam loaded as shown in the fig is _____



a) 2 (CO1) [Knowledge]

b) 1

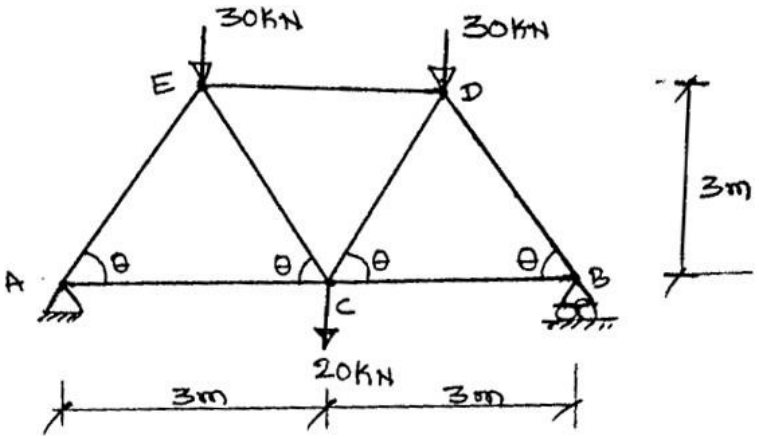
c) 4

d) 6

PART B

ANSWER ALL THE QUESTIONS **(2 X 10 = 20M)**

6. Calculate the support reactions and determine the forces in all the members of a truss loaded as shown in the fig by method of joints.



(CO1) [Comprehension]

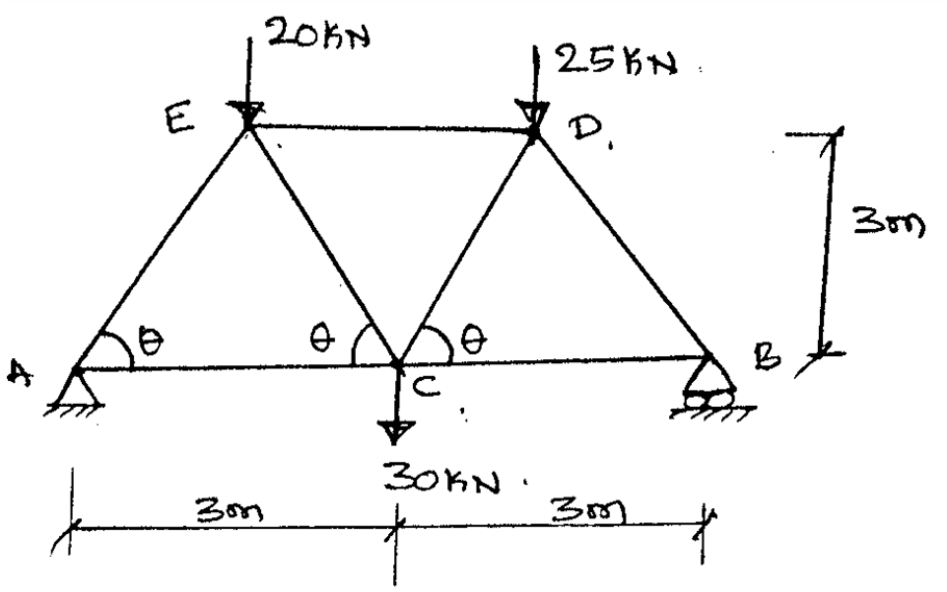
7. The hinged symmetrical Parabolic arch of span 50 m and central rise 6 m is carrying a point load of 200 kN at distance 12.5m from left support. Calculate the support reactions and draw the bending moment diagram.

(CO2) [Comprehension]

PART C

ANSWER THE FOLLOWING QUESTION **(1 X 20 = 20M)**

8. Calculate the support reactions and find the forces in all the members of a truss loaded as shown in the fig by method of joints.



(CO1) [Application]