Roll No.												

PRESIDENCY UNIVERSITY

BENGALURU

Mid - Term Examinations – March 2026

Date: 12- 03-2026 **Time:** 02:00pm – 03:30pm

School: SOE	**Program:** Civil Engineering	
Course Code: CIV2506	**Course Name:** Analysis of Determinate Structures	
Semester: IV	**Max Marks**:50	**Weightage**: 25%

CO - Levels	CO1	CO2	CO3
Marks	10	15	25

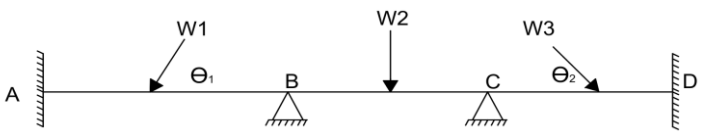
Instructions:

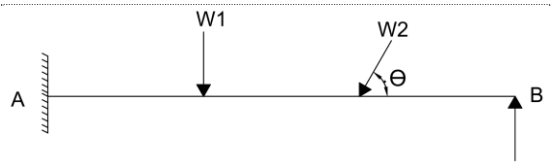
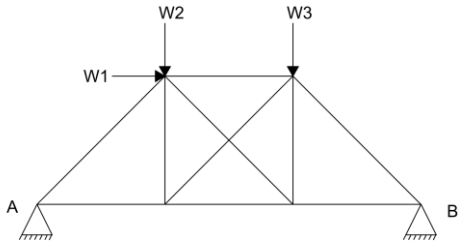
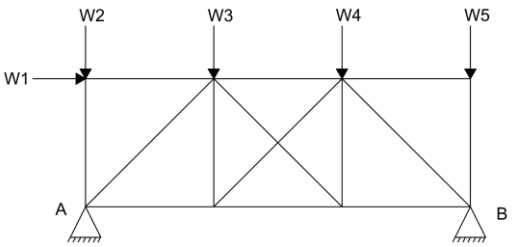
(i) Read all questions carefully and answer accordingly.

(ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks. **5Q x 2M=10M**

1	Compute the Degree of Indeterminacy of Fixed Beam shown in the figure. 	**2 Marks**	**L2**	**CO1**
2	Compute the Degree of Indeterminacy a Continuous beam shown in figure. 	**2 Marks**	**L2**	**CO1**
3	Compute the Degree of Indeterminacy of a Propped cantilever beam shown in figure.	**2 Marks**	**L2**	**CO1**

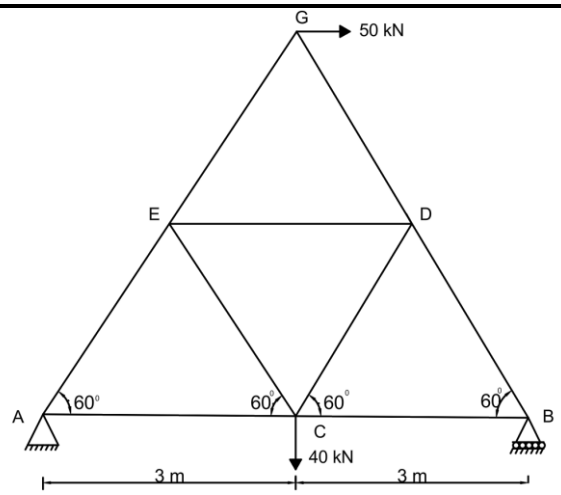
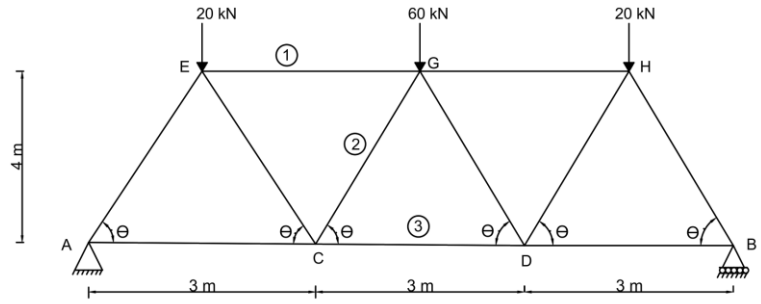
				
4	Compute the Total Degree of Indeterminacy of a truss shown in figure. 	**2 Marks**	**L2**	**CO1**
5	Compute the Total Degree of Indeterminacy of a truss shown in figure. 	**2 Marks**	**L2**	**CO1**

Part B

Answer the Questions. **Total Marks 40M**

6.	Three hinged symmetrical parabolic arches of span 60m and rise 15m is subjected to UDL of magnitude 20kN/m on left half of the arch. Calculate the reactions and draw BMD.	**10 Marks**	**L3**	**CO3**
	Or			
7.	Three hinged symmetrical parabolic arches of span 40m and rise 10m is subjected to a point load of magnitude 200kN at a distance 10m from the left support. Calculate the reactions and draw BMD.	**10 Marks**	**L3**	**CO3**

8.	Calculate the reactions and forces in all the members of truss loaded as shown in the figure by method of joints or sections.	**15 Marks**	**L3**	**CO2**

				
	Or			
9.	Calculate the forces in three members of truss marked against a member by method of sections. 	**15 Marks**	**L3**	**CO2**

10.	Three hinged symmetrical parabolic arches of span 50 m and rise 15m is subjected to UDL of magnitude 25kN/m on left half of the arch. Calculate the reactions and draw BMD. Also calculate the radial thrust and normal shear at 12.5 m from the left end.	**15 Marks**	**L3**	**CO3**
	Or			
11.	Three hinged symmetrical parabolic arches of span 60m and rise 15m is subjected to a point load of magnitude 300kN at a distance 15m from the left support and 200 kN load at a distance 15m from the right end support. Calculate the reactions and draw BMD and also calculate the normal shear and radial thrust at 15 m from the left end support.	**15 Marks**	**L3**	**CO3**