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**PRESIDENCY UNIVERSITY**

**Bengaluru**

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| **End - Term Examinations – JANUARY 2025** |
| **Date:** 03-01-2025 **Time:** 09:30 am – 12:30 pm |

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| --- | --- | --- |
| **School:** School of Engineering | **Program:** B.Tech CIV/CII | |
| **Course Code :** CIV3002 | **Course Name :** Analysis of Indeterminate Structure | |
| **Semester**: V | **Max Marks**: 100 | **Weightage**: 50% |

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| **CO - Levels** | **CO1** | **CO2** | **CO3** |
| **Marks** | **20** | **40** | **40** |

**Instructions:**

1. *Read all questions carefully and answer accordingly.*
2. *Do not write anything on the question paper other than roll number.*

**Part A**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Answer ALL the Questions. 10 x 2 Marks=20Marks** | | | | |
| **1** | Determine fixed end moments for the beam loaded as shown in figure. | **2 Marks** | **L5** | **CO1** |
| **2** | Determine fixed end moments for the beam loaded as shown in figure. | **2 Marks** | **L5** | **CO1** |
| **3** | Determine fixed end moments for the beam loaded as shown in figure. | **2 Marks** | **L5** | **CO1** |
| **4** | Determine fixed end moments for the beam loaded as shown in figure. | **2 Marks** | **L5** | **CO1** |
| **5** | Determine fixed end moments for the beam loaded as shown in figure. | **2 Marks** | **L5** | **CO1** |
| **6** | Determine fixed end moments for the beam loaded as shown in figure. | **2 Marks** | **L5** | **CO1** |
| **7** | Determine fixed end moments for the beam loaded as shown in figure. | **2 Marks** | **L5** | **CO1** |
| **8** | Determine fixed end moments for the beam loaded as shown in figure. | **2 Marks** | **L5** | **CO1** |
| **9** | Determine fixed end moments for the beam loaded as shown in figure. | **2 Marks** | **L5** | **CO1** |
| **10** | Determine fixed end moments for the beam loaded as shown in figure. | **2 Marks** | **L5** | **CO1** |

**Part B**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Answer the Questions Total 80 Marks.** | | | | | |
| **11.** | Analyze the Continuous beam loaded as shown in the fig by slope deflection method and draw the BMD and SFD and also sketch the deflected shape of the structure. | | **20 Marks** | **L4** | **CO2** |
| **or** | | | | | |
| **12.** | Analyze the portal frame loaded as shown in the fig by slope deflection method and draw the BMD and also sketch the deflected shape of the structure. | | **20 Marks** | **L4** | **CO2** |
|  |  |  |  |  |  |
| **13.** | Analyze the Continuous beam loaded as shown in the fig by moment distribution method and draw the BMD and SFD and also sketch the deflected shape of the structure. | | **20 Marks** | **L4** | **CO2** |
| **or** | | | | | |
| **14.** | Analyze the frame loaded as shown in the fig by moment distribution method and draw the BMD and also sketch the deflected shape of the structure. Take EI = constant. | | **20 Marks** | **L4** | **CO2** |

|  |  |  |  |  |
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| **15.** | Analyze the Continuous beam loaded as shown in the fig by Kani’s method and draw the BMD and SFD and also sketch the deflected shape of the structure. | **20 Marks** | **L4** | **CO3** |
| **Or** | | | | |
| **16.** | Analyze the Portal frame loaded as shown in the fig by Kani’s method and draw the BMD and also sketch the deflected shape of the structure. | **20 Marks** | **L4** | **CO3** |

|  |  |  |  |  |
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| **17.** | Analyze the Continuous beam loaded as shown in the fig by flexibility matrix method and draw the BMD and SFD and also sketch the deflected shape of the structure. | **20 Marks** | **L4** | **CO3** |
| **Or** | | | | |
| **18.** | Analyze the Continuous beam loaded as shown in the fig by stiffness matrix method and draw the BMD and SFD and also sketch the deflected shape of the structure. | **20 Marks** | **L4** | **CO3** |

**\*\*\*\*\* BEST WISHES \*\*\*\*\***