No. of Printed Pages : **3 + Drawing Sheet**

BICE-011

01027

B. TECH. CIVIL ENGINEERING (BTCLEVI)

Term-End Examination

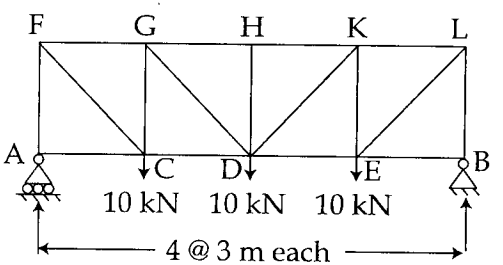
June, 2013

BICE-011: STRUCTURAL ANALYSIS - II

Time : 3 hours *Maximum Marks : 70*

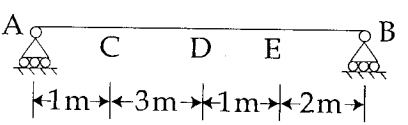
Note : *Attempt **any seven** questions. Use of scientific calculator is **permitted.** Assume any missing data suitably.*

1. Using the method of sections. Compute the axial forces in members GC, GH, GD and CD of the truss shown below : **10**



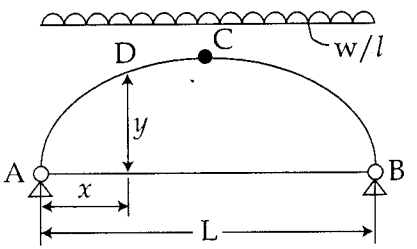
2. Explain the Castigliano's First and second theorem in detail with suitable examples. **10**

3. Draw influence line, diagrams for the reactions at supports and S.F, at C and D and B.M, at E as shown below. **10**



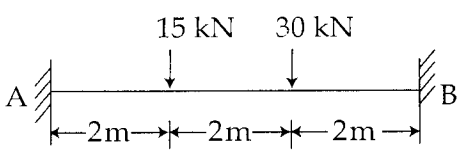
4. A uniformly distributed load of intensity 120 kN/m, 25 m in length crosses a simply supported girder of span 20 m. Determine the maximum shear force (+ve and -ve) and bending moment at a section D at 6 m from left support. **10**

5. Determine support reaction components, the internal forces at D in the arch shown in fig., loaded u.d.l of W/L over whole span. **10**

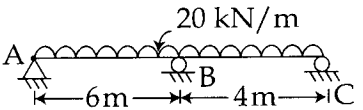


6. Explain Eddy's theorem, rib shortening and temperature effects on an arch. **10**

7. Analyse the fixed beam as shown below and draw the SFD and BMD. **10**



8. Analyse the continuous beam as shown below by using theorem of three moments and draw the BMD. 10



9. Analyse the beam as shown below using slope deflection method and draw the BMD. 10