No. of Printed Pages : 2 + Drawing Sheet

BICE-016

01588

B. TECH. (CIVIL ENGINEERING)
BTCLEVI

Term-End Examination

June, 2013

BICE-016 : STRUCTURAL ANALYSIS - III

Time : 3 hours *Maximum Marks : 70*

Note : *Answer **any five** questions.*

1. A beam AB of span *l* fixed at A and simply supported at B carries a uniformly distributed load of W per unit run over the whole span. Find the support moments and draw B.M. diagram. **14**

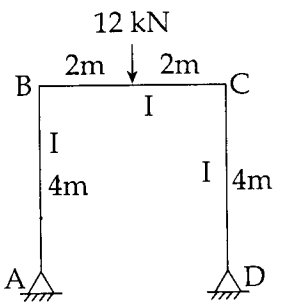
2. A continuous beam ABC of uniform section consists of span AB and BC of lengths 3 m and 4 m respectively, the ends A and C being fixed. The spans AB and CD carry uniformly distributed loads of 4 kN/m and 5 kN/m respectively. Find the support moments. **14**

3. A simply supported beam of length *l* carries a point load W at centre. Find the length of the plastic hinge if shape factor for the beam section is Ks. **14**

4. Compare force method and displacement method with suitable examples. **14**

5. A uniformly distributed live load of 60 kN per meter run of length 5 meters on a girder of span 16 meters. Find the maximum positive and negative shear force at section 6 meters from the left end, using Influence Line diagram. **14**

6. Analyse the portal frame shown in figure below using moment distribution method. **14**



7. Write short notes on **any two** : **14**
   (a) Muller Breslau's principle,
   (b) Cantilever method,
   (c) Determinate and Indeterminate structure.