00321

No. of Printed Pages : 2

**BICEE-009**

# B.Tech. CIVIL ENGINEERING (BTCLEVI)

## Term-End Examination

## December, 2015

## BICEE-009 : ADVANCED STEEL DESIGN

*Time : 3 hours* *Maximum Marks : 70*

***Note :*** *Answer **all** questions. Assume any missing data suitably. BIS codes are allowed. Use of scientific calculator is allowed.*

**1.** Design a simply supported riveted plate girder with a span of 20 m and carrying a uniformly distributed load of 12·5 kN/m. In addition, it carries two concentrated loads of 325 kN each, at middle third portion. Use steel grade Fe 250. *20*

**2.** Discuss in detail about any ***two*** of the following : $2 \times 7\frac{1}{2} = 15$

(a) Design of connections of flange element

(b) Tower configuration and loads acting on towers

(c) Analysis of towers

3. Design a self-supporting steel chimney of height 40 m above foundation with diameter of cylindrical portion equal to 1·4 m. It has a 75 mm thick lining on the inside. *15*

4. Design a welded cylindrical tank with a hemispherical bottom for a capacity of 1,00,000 litre. The height upto top of columns is 12 m. Use mild steel for design. *20*

**OR**

Write down the design procedure for the following : *20*

(a) Design of Stiffeners

(b) Design of Splices