BICE-009

00844

B.Tech. CIVIL ENGINEERING

Term-End Examination

June, 2014

BICE-009 : CIVIL ENGINEERING

Time : 3 hours *Maximum Marks : 70*

Note : *Question **No.1** is **compulsory** and in the remaining answer **any six**.*

1. Answer **any five** of the following : **5x2=10**

(a) Excessive contrast or abrupt and large changes in brightness produce the effect of :
   (i) Glare
   (ii) Illuminance
   (iii) Sharpness
   (iv) Lumen

(b) The source of noise in the air conditioning system could be from :
   (i) Chiller
   (ii) Pumps
   (iii) Compressors
   (iv) All the above

(c) Ventilation is required to control :
   (i) Oxygen content
   (ii) Heat
   (iii) Bacteria
   (iv) All the above

(d) Smoke test is used for testing :
   (i) Soil pipe
   (ii) Vent pipe
   (iii) Both (i) and (ii)
   (iv) Neither (i) nor (ii)

(e) As a thumb rule, the seismic strengthening and retroffiting is adopted instead of reconstruction, when the cost of repair is :
   (i) < 50% of reconstruction cost
   (ii) < 75% of reconstruction cost
   (iii) > 50% of reconstruction cost
   (iv) > 75% of reconstruction cost

(f) Fire resistant of a building has to satisfy :
   (i) resistance to collapse
   (ii) resistance to temperature rise
   (iii) resistance to penetration of flame
   (iv) all the above

2. (a) Make an assessment of the requirements of a good stair. **7**

(b) Give a list on types of steps, in regard to staircase. **3**

3. (a) Define fire load. **2**

(b) Make a list of fire extinguishing methods and discuss its suitability for different types of buildings. **8**

4. Write short note on **any four** of the following :
   (a) Apparent movement of the sun **4x2½=10**
   (b) Comfort zone
   (c) Classification of climate
   (d) Artificial lighting
   (e) Common acoustic defects

5. Explain the different methods of thermal insulation, in regard to : **2x5=10**

   (a) Exposed walls

   (b) Exposed doors and windows

6. Explain any two methods of distribution of water in a multi-storeyed building, with neat sketch. **10**

7. What are the different types of concrete failure ? Explain any one type, with emphasis on causes and remedial measures. **10**

8. Explain sound insulation with respect to air-borne noise, structure-borne noise and impact noise. **10**