Diploma in Civil Engineering

Term-End Examination

June, 2007

BCE-024 : CONSTRUCTION TECHNOLOGY – I

Time : 2 hours *Maximum Marks : 70*

Note : *Question no. 1 is **compulsory**. Attempt any **four** more questions out of Questions No. 2 to 7. All questions carry equal marks. Explain your answers with the help of neat and labelled sketches.*

1. Choose the correct alternatives : *7×2=14*

(a) Well foundations are normally used under

(i) Industrial building columns

(ii) Structures on river beds

(iii) Tall buildings

(iv) Off-shore wells

(b) A damp-proof course in a brick wall can be

(i) 40 to 50 mm thick plain cement concrete of at least 1 : 2 : 4

(ii) 20 to 30 mm thick plain cement concrete of at least $1 : 1\frac{1}{2} : 3$

(iii) Lime-cement mortar of at least 15 mm thick

(iv) Lime finished concrete

(c) The bearing capacity of a water-logged soil can be improved by

(i) compacting the soil

(ii) draining the soil

(iii) increasing the depth of foundation

(iv) grouting

(d) The minimum thickness of inner wall in case of cavity wall is restricted to

(i) 25 mm

(ii) 50 mm

(iii) 100 mm

(iv) 75 mm

(e) Scaffolding is in the form of

(i) Plastic framework

(ii) Paper framework

(iii) Glass framework

(iv) Timber or steel framework

(f) The suitable door for garage is

(i) Revolving door

(ii) Rolling door

(iii) Swinging door

(iv) Collapsible door

(g) From the point of view of maximum daylight, the windows in a room should be located on

(i) eastern side

(ii) western side

(iii) northern side

(iv) southern side

2. (a) Explain the various factors on which depth of foundation of a building structure depends. 7

(b) Briefly describe the Pier foundation with the help of a neat sketch. 7

3. (a) What do you mean by Retaining wall ? Explain its uses. 7

(b) When do you use reinforced brick work ? Explain the details of its construction. 7

4. (a) Define and briefly describe about termites and their types. 7

(b) Describe the precautions that should be taken for preventing dampness in buildings. 7

5. (a) Explain various types of lintels in brief. 7

(b) How would you check the stability of an Arch ? Explain in brief. 7

6. (a) What do you mean by floors ? Explain its components. 7

(b) Explain the important factors affecting construction of Upper Floors. 7

7. (a) Describe the various factors to be considered while locating a door. Also write the commonly used sizes of doors. 7

(b) Explain the various factors to be kept in mind while designing windows in a room. 7