

# C.U. SHAH UNIVERSITY

## Summer Examination-2017

**Subject Name: Building Construction**

**Subject Code: 4TE03BCN1**

**Branch: B.Tech (Civil)**

**Semester: 3**

**Date: 23/03/2017**

**Time: 10:30 To 01:30**

**Marks: 70**

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
  - (2) Instructions written on main answer book are strictly to be obeyed.
  - (3) Draw neat diagrams and figures (if necessary) at right places.
  - (4) Assume suitable data if needed.
- 

- Q-1 Attempt the following questions: (14)**
- a) Spread footing foundation is (1)**
- (a) deep foundation
  - (b) shallow foundation
  - (c) suitable for black cotton soil
  - (d) both (b) and (c)
- b) The lengthy face of the brick is known as (1)**
- (a) face
  - (b) king closer
  - (c) queen closer
  - (d) stretcher
- c) A single stone which is fixed at regular intervals joining face and back is called (1)**
- (a) frog
  - (b) through stone
  - (c) natural stone
  - (d) plinth course
- d) A king closer is a (1)**
- (a) full brick
  - (b) 3/4 brick
  - (c) longitudinally 1/2 brick
  - (d) crosswise 1/2 brick
- e) External corners of the wall are called (1)**
- (a) frogs
  - (b) bats
  - (c) heartings
  - (d) quoins
- f) Pieces of stones are called (1)**
- (a) ballast
  - (b) spalls
  - (c) crushed stone
  - (d) none of these



- g)** Size of modular bricks is (1)
- (a) 19 x 9 x 9 cm  
 (b) 20 x 10 x 10 cm  
 (c) 22 x 11 x 7.5 cm  
 (d) 23 x 12 x 8.5 cm
- h)** In English bond, in each header course a \_\_\_\_ is placed next to quoin header. (1)
- (a) king closer  
 (b) half bat  
 (c) queen closer  
 (d) none of these
- i)** In English bond stretchers overlaps upto \_\_\_\_ of their length over the header course. (1)
- (a) 10%  
 (b) 25%  
 (c) 50%  
 (d) 75%
- j)** Fire resistance of brick masonry is (1)
- (a) very low  
 (b) low  
 (c) high  
 (d) extremely high
- k)** Reinforced concrete footing (1)
- (a) is used for soils with low bearing capacity  
 (b) is used for soils with high bearing capacity  
 (c) is used for black cotton soils  
 (d) none of the above
- l)** The grade of cement concrete used in spread footing bottom support is (1)
- (a) 1:2:4  
 (b) 1:3:6  
 (c) 1:4:8  
 (d) either (b) or (c)
- m)** Various courses of spread footing are generally (1)
- (a) 10 to 30 cm deep  
 (b) 20 to 30 cm deep  
 (c) > 30 cm deep  
 (d) < 20 cm deep
- n)** Spread footing foundation consists of (1)
- (a) piles  
 (b) widened footings  
 (c) concrete columns to support load of super structure  
 (d) none of the above

**Attempt any four questions from Q-2 to Q-8**

- Q-2** **Attempt all questions** (14)
- A** Explain with sketch: (6)
1. R.C.C.Lintel  
 2. Semicircular brick arch
- B** What is bond ? state different types of bonds in brick masonry and explain stretcher bond. (8)



- Q-3**      **Attempt all questions**      (14)  
    **A**      What is Foundations? Explain types of Foundations      (7)  
    **B**      Explain Grillage foundation briefly.      (7)
- Q-4**      **Attempt all questions**      (14)  
    **A**      Explain fire resisting properties of common building materials.      (7)  
    **B**      Classify the stairs and Explain half turn stair      (7)
- Q-5**      **Attempt all questions**      (14)  
    **A**      What are the essential requirements of a good floor?      (7)  
    **B**      Describe with neat sketch different types of rubble masonry.      (7)
- Q-6**      **Attempt all questions**      (14)  
    **A**      Write the purposes of site exploration. Enlist various methods of site exploration.      (7)  
                Explain seismic refraction method with sketch.  
    **B**      Give the suitability of following types of foundation with respective figures.      (7)
1.          Wall footing  
                2.          Isolated footing  
                3.          Combined footing
- Q-7**      **Attempt all questions**      (14)  
    **A**      Explain brick cavity wall.      (7)  
    **B**      Describe objectives of subsurface investigation and discuss wash boring in detail.      (7)
- Q-8**      **Attempt all questions**      (14)  
    **A**      Describe the factors affecting selection of size, shape and location of window.      (6)  
    **B**      Write short note on (1) Pointing (2) Plastering      (8)

