Reg. No.



## INTERNATIONAL CENTRE FOR APPLIED SCIENCES (Manipal University) III SEMESTER B.S. DEGREE EXAMINATION – MAY 2016

SUBJECT: BUILDING CONSTRUCTION – II (CE 231)

19<sup>th</sup> May, 2016

## **Time: 3 Hours**

Max. Marks: 100

- ✓ Answer ANY FIVE Questions.
- ✓ Any missing data may be suitably assumed.
- ✓ Figures should be neatly drawn

**1A**. Explain the different methods of improving safe bearing capacity of soil.

**1B**. What are the requirements of good foundation.

**1C**. Explain plate load test to determine the ultimate bearing capacity of soil with the help of sketch. (6+4+10 = 20 marks)

**2A.** Explain English bond with the help of neat sketch showing elevation and plan for 1 brick thick wall.

**2B**. Describe the following terms with help of a sketch:

- I. King closer
- II. Queen closer
- III. Half bat
- IV. Header course
- V. Stretcher course

(10+10 = 20marks)

- 3A. Write short note on
  - a. Cement concrete flooring.
  - b. Mosaic flooring
- **3B**. Explain Queen post truss with help of a neat sketch.

(10+10 = 20marks)

- **4A.** Write any six characteristics of ideal paint.
- **4B.** Plan a Dog legged staircase for a residential building in which the vertical distance between each floor is 3.0m. The size of the stair hall is limited to 4.25m X 2.2m.

Draw plan and sectional elevation proportionally.

**4C**. Explain the following types of roof covering:

- I. Asbestos cement sheet.
- II. Galvanized Iron sheet (G.I sheets).

(6+9+5 = 20 marks)

- 5A. Write any five general requirements which a stair should fulfill.
- **5B**. Explain any five types of pointing with the help of sketch.
- **5C**. Describe the steps involved in the two-coat cement plastering for wall.

(10+5+5 = 20marks)

- 6A. Write a short note on Raking shores
- **6B**. What are the factors that affect the choice of flooring materials

**6C.** Explain the procedure of painting the new wood surface.

**7A.**The accompanying sketch (Figure Q 7A) shows the plan of a residential building and a section through the wall. Workout the quantities of Earthwork in excavation of foundation trenches by Centre line method.



Figure (Q 7A)

Schedule of opening DOOR:  $D = 1.2m \times 2.1m$   $D_1=0.9m \times 2.1m$ WINDOWS:  $W_1 = 2.0m \times 1.5m$   $W_2 = 1.5m \times 1.5m$  $V = 1.0m \times 0.6m$ 

**7B.** Calculate the quantities of various materials required for the following items of work. (Any two)

- I.  $1^{st}$  class brickwork in superstructure with 20x10x10cm brick in CM 1:6.
- II. Earth work in excavation in foundation including filling in trenches upto 30m lead &
  1.5m lift unit 100 cu m.
- III. 2.5cm cement concrete 1:2:4 for Damp proof course

(10+10 = 20marks)

8A. Explain the important points that has to be kept in mind while supervising stone masonry.8B. Write any five general requirements which a stair should fulfill. (10+10 = 20marks)