

Seat No. : _____

NL-119

November-2013

B. Arch/ID/BCT (Sem-V)

Building Construction and Techniques-V (AR-502)

Time : 3 Hours]

[Max. Marks : 100

- Instructions :**
- (1) Attempt **all** questions.
 - (2) Figures on the right indicate full marks.
 - (3) Draw neat sketches wherever required.
 - (4) Assume any missing data, if required.

1. Explain construction method of RCC barrel vault roof structure with the help of neat sketches. Differentiate between long span and short span barrels. **20**

OR

What do you understand by traffic management system ? Explain with suitable diagrams - lift with machine room and without machine room. What factors should be considered for installing a lift in a building ?

2. Answer the following : **30**

- i. What is an earthquake resistant structure ? What is the influence of architectural features on earthquake behaviour of buildings ?
- ii. Explain seismic joints and reasons for their occurrence in detail. What precautionary measures can be taken to avoid them ?
- iii. What safety measures should be taken for handicapped people while designing a ramp in a public building ?

3. Explain in detail (any **two**) : **20**

- i. Explain singly and doubly curved shell roof with suitable examples.
- ii. Different types of joints and their importance in buildings.
- iii. What various measures could be taken for masonry and concrete buildings to make them earthquake resistant ?

4. Differentiate between (any **three**) : **15**

- i. Construction joints and Structural joints
- ii. Space truss and Space frame
- iii. Electric elevators and Hydraulic elevators
- iv. P waves and S waves

5. Define (any **three**) : **15**

- i. Joint fillers
- ii. Seismic zones in India
- iii. Focus point and epicenter of an earthquake
- iv. Escalators and travellators