

**NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**FACULTY OF THE BUILT ENVIRONMENT**  
**BACHELOR OF QUANTITY SURVEYING (HONOURS) DEGREE**  
**PART I FIRST SEMESTER SUPPLEMENTARY EXAMINATIONS – 2012**  
**BUILDING CONSTRUCTION I - AQS 1110**

Time: 3 hours

Total marks: 100

***Instructions:***

- (1) The paper has two printed pages
  - (2) Answer all questions
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**Question One**

- (a) List factors to be considered when planning a site exploration programme. (5 marks)
- (b) What are the factors to be considered in estimating the minimum depth of exploration? (5 marks)
- (c) Explain two major design considerations for foundations. (5 marks)
- (d) Sketch a strap footing and explain under what conditions it is resorted to? (10 marks)

**Question Two**

- (a) Describe with the aid of sketches a typical cross-wall construction, and also furnish methods that can be used to improve the stability of the system. (10 marks)
- (b) Explain the functional requirements of a good wall. (15 marks)

**Question Three**

- (a) Explain the following roof terms:

- (i) Roof light
- (ii) Dormer
- (iii) Ventilator
- (iv) Jack rafter
- (v) Verge
- (vi) Valley (18 marks)

- (b) Distinguish a skeleton core flush door from a solid core flush door. (7 marks)

#### **Question Four**

Describe the following types of foundations:

- (i) Strip foundation
- (ii) Raft foundation
- (iii) Pad foundation
- (iv) Pile foundation
- (v) Cantilever foundation

(25 marks)