NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
FACULTY OF ARCHITECTURE AND QUANTITY SURVEYING

DEPARTMENT OF ARCHITECTURE
BACHELOR OF ARCHITECTURAL STUDIES (HONOURS) DEGREE

PART III FIRST SEMESTER SUPPLEMENTARY EXAMINATIONS – AUGUST 2014
AAR 3108 – BUILDING CONSTRUCTION III

Instructions
Answer all questions ***Time :*** ***4 Hours***

Answer Question 1 on the A1 ***sheets*** *provided.*
Use pencil or technical pens only

QUESTION 1

Draw the section of a 2 storey building on good soils from the foundation through a window on ground floor and a door on the first floor to the roof. The door on the first floor provides access to a 1.8 m balcony.

Clearly show details of how dampness is prevented within the building.

The distance of the outer brick cavity walls *(300mm thick)* is 8m and the building is under Concrete tiles. The floor to floor height is 3m.

Use a scale of 1:50 for the section and 1:5 for the details.

[40]

QUESTION 2

a) State five advantages of use of steel scaffolding. (5)

b) Using well labeled sketches explain the use of independent scaffolds on multistory structures. (15)

[20]

QUESTION 3

(a) Identify 5 situations where shoring may be required in construction. (10)

(b) Using well labeled sketches show how flying shores are applied. (10)

[20]

QUESTION 4

(a) Give 3 reasons why pile foundations are becoming more common in today's construction (6)

(b) What are Friction piles and explain their use *(using sketches)* (7)

(c) Using sketches provide Formwork details for concrete at right angles. (7)

[20]