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

DEPARTMENT OF ARCHITECTURE
BACHELOR OF ARCHITECTURAL STUDIES (HONOURS) DEGREE

PART II SUPPLEMENTARY EXAMINATIONS – AUGUST 2004
AAR 2102 – BUILDING CONSTRUCTION I

Instructions ***Time : 3 Hours***

Answer All Questions
All Questions carry equal marks 25 Marks
Use clearly annotated sketches to illustrate your answers.

QUESTION 1

a) Using the case of a two-storey building, discuss the basic principles which guide the design and construction of a suspended timber ground floor.

b) Draw a typical section through the 2-storey building to illustrate the structural inter-relationships between the reinforced concrete floor slabs and beams , the door and window lintels, etc. Assume brick material for the wall construction.

QUESTION 2

a) Architects' specific roles in the building industry vary depending on the stage of the project. Summarise the activities in the contract stage with emphasis on the architect's roles.

b) Who is Building Inspector and what are his roles in the building industry?

QUESTION 3

a) Define the load bearing capacity of subsoil.

b) If you confronted with a site of black subsoil of substantial depth, recommend and produce detailed annotated drawings of the foundation type appropriate for a double storey residential building.

c) State in detail justifications for your recommendation.

QUESTION 4

a) Give a detailed description of the structure and construction of a hipped-end roof using wood shingle tiles.

b) In what ways will the roof trusses, etc. differ if the roofing material is of corrugated iron sheets?