

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

Time : 3 Hours

Instructions

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?