

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

DEPARTMENT OF ARCHITECTURE
BACHELOR OF ARCHITECTURAL STUDIES (HONOURS) DEGREE

PART V SUPPLEMENTARY EXAMINATIONS – AUGUST 2004
AAR 5102 – BUILDING CONSTRUCTION V

Instructions

Time : 3 Hours

*Answer All Questions
All question carry equal marks
Draw clearly annotated sketches.*

QUESTION 1

Draw a neat section through a six storey building with a basement highlighting details of the following.

- Internal mastic tanking of its reinforced concrete basement wall.
- Precast concrete flooring system.
- Paneled suspended grid framework ceiling
- Glass curtain wall
- Demonstrate gypsum board and aluminium frame partition
- Reinforced concrete roof slab with a parapet [40]

QUESTION 2

Construction of multi-storey buildings has become a common practice in modern times. Briefly describe the types of structural framework employed highlighting the positive aspects of each and comment on the system widely used in Zimbabwe.

QUESTION 3

State the general functional requirements of external walling systems and recommend three sustainable external walling systems for construction of multi-storey buildings under the climatic conditions in Bulawayo. [20]

QUESTION 4

Draw neat sketches illustrating the following

- a) Combination of floating and suspended slab on an inclined site. [5]
- b) Drained cavity technique for basement tanking. [5]
- c) Typical subsoil drain details and show three (3) different subsoil drain layout systems employed to drain a site with a building structure on it. [10]