

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

DEPARTMENT OF ARCHITECTURE
BACHELOR OF ARCHITECTURAL STUDIES (HONOURS) DEGREE

PART II END OF FIRST SEMESTER EXAMINATIONS – JUNE 2004
AAR 2202 – BUILDING CONSTRUCTION II

Instructions

Time : 3 Hours

Answer All Questions.

Use clearly annotated drawings to illustrate your answers.

All Questions carry equal marks (25)

QUESTION 1

Draw a stair connecting ground floor with first floor of a residential building. Provide one landing in between.

- Take the level of ground floor as 0.0m and that of the first floor as 3,0m.
 - Assume your own dimensions for treads and risers.
 - Any other dimension required may also be assumed.
 - Illustrate your answer with appropriate sketches, and indicate names of various parts and components of your stair.
- [25]

QUESTION 2

- a) Name different types of wooden trusses commonly used for sloping (steep) roofs.
 - b) Illustrate your answer with the aid of sketch drawings.
 - c) State the maximum span up to which a particular type can be used.
- [25]

QUESTION 3

- a) Drainage and falls are of a major concern when designing flat roofs. Provide a clearly labelled sketch drawing of a typical straight fall rainwater outlet where the roof is drained by internal outlets. [15]
- b) If you are confronted with a site of black cotton sub soil 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?