

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

DEPARTMENT OF ARCHITECTURE
BACHELOR OF ARCHITECTURAL STUDIES (HONOURS) DEGREE

PART V - END OF FIRST SEMESTER EXAMINATIONS – DECEMBER 2006
AAR 5102 - BUILDING CONSTRUCTION V

INSTRUCTIONS:

TIME: 3 HOURS

Answer Question ONE and any other TWO

All questions carry equal marks

Clarity and correct use of professional expressions attract bonus marks.

QUESTION ONE - Compulsory

- a) Distinguish between **building types** and **building construction systems**. Give three examples of each. (5)
- b) With reference to any **two** specific building types, concisely outline the unique areas of applications of **timber portal frames** with the aid of simple sketches. (20)

QUESTION TWO

- a) Portal frames operate on some unique **constructional theory**. Comment. (5)
- b) Name any five types of Portal Frames used in contemporary Architecture. With the aid of simple sketches, analyze **one** of them in terms of foundations and fixings, typical details and constructional advantages. (20)

QUESTION THREE

Write short illustrative annotations on the following in terms of construction techniques, details and areas of applications.

- Concrete cladding panels (12.5)
- Rain-screen cladding (12.5)

QUESTION FOUR

- Outline the merits and demerits of Pre-stressed concrete. (5)
- With the aid of simple sketches, comment on Pre-stressed concrete systems. (20)