



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2010/2011**

COURSE NAME : BUILDING CONSTRUCTION
COURSE CODE : BFB4083
PROGRAMME : 4 BFF
EXAMINATION DATE : APRIL / MAY 2011
DURATION : 3 HOURS
INSTRUCTION : ANSWER ALL QUESTIONS.

THIS PAPER CONSISTS OF FIVE (5) PAGES

- Q1** (a) List down all the structures which included in superstructure and explain briefly each function.

(10 marks)

- (b) Explain with the aid of sketches; basement floor, solid floor and suspended floor.

(15 marks)

- Q2** (a) Explain how a specific building design requires an influence from architectural, mechanical, lighting and acoustic touch.

(8 marks)

- (b) Explain why most people would consider steel structures lighter than concrete structures but the truth is “Concrete is lighter than steel”.

(7 marks)

- (c) Name and describe **five (5)** principles of light weight structural design.

(10 marks)

- Q3** (a) Curtain wall construction for multi-storey buildings has gained popularity recently due to the development of steel and concrete structural frame.

- i) Explain briefly **four (4)** advantages of curtain wall construction.

(8 marks)

- ii) Describe **two (2)** curtain wall systems using appropriate sketches.

(7 marks)

- (b) Warm-humid with lots of sunshine and rains, and generally low wind velocity throughout the year are the characteristics of Malaysia’s tropical climate. With the aid of a sketch, discuss the most suitable roof type for a building and its construction by incorporating other roofing installations in order to respond to the local climatic conditions.

(10 marks)

- Q4**
- (a) i) Explain clearly the characteristics of a good sub-grade for a highway structure.
(5 marks)
- ii) With the aid of sketches, describe **three (3)** common types of surface drainage that can be provided in the design and construction of highways.
(12 marks)
- (b) Leakage and dampness in flat roofs are some of the common problems due to improper drainage system. Discuss several considerations to be taken into account when planning drainage system for flat roofs.
(8 marks)