

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF BUILT ENVIRONMENT

BACHELOR OF QUANTITY SURVEYING (HONOURS) DEGREE

PART II FIRST SEMESTER EXAMINATIONS APRIL 2009

BUILDING CONSTRUCTION I – AOS 1110

TIME: 3 Hours

TOTAL MARKS: 100

INSTRUCTIONS:

Answer all questions in Section A and any one question in Section B

SECTION A

Question One

Two residential stands with different locations are on sale. The stands are of the same size, that is one acre, one on a hilly area while the other is on low lying area. Mr. Bean has asked you to assist him in selecting the best site for his residence.

- a) Briefly outline how you can advise Mr. Bean on site selection. (14 marks)
- b) List six types of drawings produced by the Architect for building realization. (6 marks)

Question Two

- a) With the aid of diagrams describe the following
 - i) Strip foundation (5 marks)
 - ii) Pad foundation (5 marks)
 - iii) Raft foundation (5 marks)
- b) Define bearing capacity of soil (3 marks)
- c) Explain how soil type affects foundation selection (7 marks)

Question Three

- a) What are the functional requirements of a good ground floor *(5 marks)*
- b) Draw a detailed section of a solid ground floor and briefly describe the purpose served by each part. *(20 marks)*

SECTION B

Question Four

- a) Outline the functions of any roof *(5 marks)*
- b) Explain and illustrate the three main categories of pitched roofs *(6 marks)*
- c) Identify two types of roof covering materials and explain how these can be fixed to roof members *(4 marks)*
- d) Illustrate a well detailed sketch showing the junction of a pitched roof and the external wall of a building *(15 marks)*

Question Five

- a) What are the functional requirements of a wall *(5 marks)*
- b) With the aid of sketches distinguish between
- i) English bond and Flemish bond *(5 marks)*
 - ii) Block-work and brickwork *(4 marks)*
- c) Outline the general principles to be observed when constructing cavity walls *(10 marks)*
- d) List the advantages and disadvantages of cavity walls *(6 marks)*

END OF EXAMINATION