

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF BUILT ENVIRONMENT

BACHELOR OF QUANTITY SURVEYING (HONOURS) DEGREE

PART II FIRST SEMESTER EXAMINATIONS JANUARY 2011

BUILDING CONSTRUCTION II – AQS 2104

TIME: 3 Hours

TOTAL MARKS: 100

INSTRUCTIONS:

Answer 1 question and any other three. Diagrams should be neat and well labelled.

Question One

- a) Illustrate diagrammatically the plan and section of an In-situ concrete staircase of open newel for dog –leg type. Briefly describe its construction including material composition. (20 marks)
- b) State the advantages and disadvantages of an In-situ concrete staircase. (5 marks)

Question Two

- a) Explain the method used to increase the tensile strength of concrete. (5 marks)
- b) Identify and briefly describe with aid of diagram one method of prestressing. (12 marks)
- c) Illustrate diagrammatically precast concrete hollow floor . (8 marks)

Question Three

- a) Where does the principle of multi-storey building construction lies on? (2 marks)
- b) State the 3 forms of framed construction. (3 marks)
- c) Illustrate diagrams of the following:-
 - i) Structural steel base to concrete foundation connection. (10 marks)
 - ii) Precast concrete column to column connection. (10 marks)

Question Four

- a) What is the purpose of including suspended ceilings in buildings? (5 marks)
- b) State the 3 common methods of a suspended ceiling. (6 marks)
- c) Illustrate any one method of a suspended ceiling. (14 marks)

Question Five

- a) Differentiate between flexible and rigid pavement. (5 marks)
- b) Differentiate between displacement piles and replacement piles. (10 marks)
- c) List the disadvantages of using precast concrete piles. (5 marks)

END OF EXAMINATION