

**NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**FACULTY OF BUILT ENVIRONMENT**  
**DEPARTMENT OF QUANTITY SURVEYING**  
**PART II SECOND SEMESTER EXAMINATIONS – JUNE 2010**  
**BUILDING CONSTRUCTION III – AQS2201**

Time: 3 hours

Total Marks: 100

**INSTRUCTIONS:**

Answer any four questions.

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**QUESTION ONE**

- a) Outline the properties of a good damp proofing material. (4 marks)
- b) Discuss three possible ways in which dampness penetrates into buildings. (9 marks)
- c) Illustrate with aid of diagrams any one method of water proofing basements. (10 marks)
- d) Illustrate how the top of a brick parapet wall can be treated to avoid dampness penetrating downwards. (2 marks)

**QUESTION TWO**

- a) By giving examples distinguish between temporary and permanent exclusion of ground water. (12 marks)
- b) Define piling and where it can be employed. (5 marks)
- c) Illustrate how precast concrete piles are sunk. (8 marks)

**QUESTION THREE**

- a) Identify and discuss 5 types of construction plant /equipment and where they can be used. (10 marks)
- b) With aid of diagrams distinguish between putlog and independent scaffolding. (10 marks)
- c) How are workmen and objects avoided from falling down while using scaffolding?

(5 marks)

**QUESTION FOUR**

- a) Discuss the traditional wall underpinning method. (10 marks)
- b) Under what circumstances is underpinning considered? (5 marks)
- c) Shoring is one of the best methods of temporarily supporting structures. Illustrate how to support a wall when creating a window opening. (10 marks)

**QUESTION FIVE**

- a) Outline the necessary steps to be taken from the time when formwork has been set in position to the time of dismantling. (10 marks)
- b) Illustrate the slab and beam formwork. (10 marks)
- c) What is the importance of formwork in construction? (5 marks)

**QUESTION SIX**

- a) Identify and discuss any 5 methods of demolition. (20 marks)
- b) What are the necessary precautions to be taken when carrying out demolitions? (5 marks)