NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
FACULTY OF THE BUILT ENVIRONMENT

DEPARTMENT OF ARCHITECTURE
BACHELOR OF ARCHITECTURAL STUDIES (HONOURS) DEGREE

PART I SUPPLEMENTARY EXAMINATIONS – JULY 2008
BAR 1104/1108– INTRODUCTION TO MATERIALS AND CONSTRUCTION I/ INTRODUCTION TO CONSTRUCTION MATERIALS I

Instructions ***Time : 3 Hours***

Answer ANY FOUR Questions.
All Questions Carry Equal Marks.

QUESTION 1

a) Illustrate with the aid of flow diagram the manufacturing processes of cement (20)

b) Clay bricks can be classified by their uses. State the uses and specify where they can be applied. (5)

QUESTION 2

a) Describe how cement/sand/lime mortar is prepared and specify the types of work for different proportions. (20)

b) What are the effects of sulphate salts in cement mortar? (5)

QUESTION 3

a) How can one be assured of the rightful water content in a concrete mix? (15)

b) State properties of clay bricks (10)

QUESTION 4

a) Explain the difference between English and Flemish bonds. (10)

b) Write brief notes on three different types of cement. (15)

QUESTION 5

a) What is the purpose of having perforations or frogs on bricks? (5)
b) Compare and contrast methods of mixing concrete. (5)
c) Describe the principles of brick bonding using sketch drawings. (15)