NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF CIVIL AND WATER ENGINEERING
FACULTY OF INDUSTRIAL TECHNOLOGY
BACHELOR OF ENGINEERING (HONOURS) DEGREE
PART II FIRST SEMESTER EXAMINATION-MAY 2009
 ENGINEERING GEOLOGY TCW 2105

INSTRUCTIONS

Answer question 1 and any other three of your choice

Time : 3 hours
Total Marks : 100

QUESTION 1

On map 1 : (a) draw strike lines on the geological boundaries .   **(3marks)**
(b) determine the thicknesses of beds B , C , D and E .   **(4marks)**
© calculate the gradients of beds B, C , D and E .   **(6marks)**
(d) draw a section along the east- west line Y-Z.   **(12marks)**

(25 marks)

QUESTION 2

Write about wind as a geological agent.   **(25 marks)**

QUESTION 3

Describe Bowen's reaction series .   **(25 marks)**

QUESTION 4

(a) Define the following geological terms : (i) petrology   (ii) mineralogy   (iii) rock
 (iv) streak and (v) cleavage.   **(10 marks)**

(b) Write about mechanically formed sedimentary rocks .   **(15 marks)**

(25 marks)

QUESTION 5

(a) Illustrate with simple sketches the following geological structures : (i) laccolith
(ii) dyke   (iii) lopolith   and (iv) dome   **(8marks)**

(b) Describe igneous rocks according to the mode of occurrence .   **(17 marks)**

(25 marks)

QUESTION 6

On the given map 6 , draw a section along A-B and describe the geological history of the area .   **(25 marks)**

LIST OF FORMULAE

Tan d^o = tan D^o x cos c

Tan d^o = tan D^o x sin s