

UNIVERSITY OF FORT HARE

<p>GLG 322 Metamorphic Petrology Engineering Geology</p>

Main Examinations: November 2018

Time: 3 Hours

Marks: 100

Subject: Geology

One paper

<p>This paper consists of 3 pages including the cover pages</p>

Internal Examiners:

External Examiner:

Mr C.J Gunter

Dr S Misra

Mr S. Sinuka

INSTRUCTIONS

Answer two (2) questions from each of Section A and B

SECTION A: METAMORPHIC PETROLOGY

QUESTION 1

Write an essay on the concept of metamorphic facies and on their significance in petrogenetic interpretation. [25]

QUESTION 2

Describe the progressive changes in the mineralogy of rocks with increasing temperature and pressure according to the classic Barrovian Zonal Scheme. [25]

QUESTION 3

Argillaceous rocks are of particular importance in studies of metamorphism because they develop a wide range of distinctive minerals. Write an essay on the representation of such stable assemblages on metamorphic phase diagrams. [25]

SECTION B: ENGINEERING GEOLOGY

QUESTION 4

With the aid of drawings, write an essay on the main types of mass wasting, and explain the formation processes and formation mechanisms of the various type of mass wasting. [25]

QUESTION 5

Give an account on the definition of soil, and the classification schemes of soil types based on the soil texture, structure and origin. You should use drawings/diagrams to support your description and explanation. [25]

QUESTION 6

With the aid of drawings/diagrams, write an essay on the physical properties of soils. [25]