

BONDO UNIVERSITY COLLEGE

UNIVERSITY EXAMINATIONS 2012/2013

FIRST YEAR SECOND SEMESTER EXAMINATIONS FOR THE DEGREE OF BACHELOR OF SCIENCE IN CONSTRUCTION MANAGEMENT

TCM 3123: Physical Environment

Date:

Time: 2hrs

INSTRUCTIONS

Answer Question **ONE** and any other **TWO** Questions.

1. a) List and explain the principal objectives for a structural design site investigations (10marks)
- b) Briefly explain your understanding of the following;
 - i) Structural geology (3 marks)
 - ii) Role of groundwater in the hydrological cycle (3 marks)
 - iii) Rock cycle (3 marks)
- c) Explain the significance of geological and structural maps in civil and structural studies (6 marks)
- d) Describe the effects of faults and related geological processes on engineering foundations (5 marks)
2. a) Discuss the impact of erosion and weathering processes on civil and structural works (8 marks)
- b) Differentiate between the following sets of terms:
 - i) Confined and Unconfined aquifer (4 marks)
 - ii) Porous and Pervious rock (4 marks)
 - iii) Rocks and Minerals (4 marks)
3. a) Citing examples, discuss the basis of classification of igneous Rocks (10 marks)
- b) Discuss the economic significance of sedimentary rocks (10 marks)
4. a) Examine factors affecting the rate of weathering (10 marks)
- b) Describe any four (4) sampling methods used in borehole drilling during site investigations (10 marks)

5. a) Discuss the environmental impacts likely to be encountered during the process of quarrying (10 marks)
- b) Suggest the possible mitigative measures to address the impacts in 5(a) above (10 marks)