

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
SCHOOL OF PHYSICAL SCIENCES
DEPARTMENT OF GEOLOGY

FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BTech GEOLOGY
2017/2018 SESSION

COURSE CODE: GEL 312

UNIT: 2

COURSE TITLE: IGNEOUS PETROLOGY

INSTRUCTIONS: ANSWER ANY THREE QUESTIONS

TIME ALLOWED: 2 HOURS

DATE: 23 APRIL 2018

1. a) Compare and contrast the amount of gas in magma in relation to the chemical composition and its explosive character.
b) Define the following terms:
i) Hyperbysal ii) Aplite iii) Pegmatite iv) Cumulates v) Petrophysics
2. a) What are the factors determining the ultimate igneous rocks produced by magma?
b) Outline the applications of igneous rocks
3. a) Use the Bowen's Reaction Series to illustrate the formation of igneous rocks
b) Give example of igneous rocks that may be formed at each stage of the reaction series
4. a) Briefly outline the geological significance of igneous rocks
b) Define the following terms:
i) Petrogenesis ii) Magmatic Differentiation iii) Fusibles iv) Fractional Crystallisation
5. a) Briefly explain the classification of igneous rocks based on Aluminium content.
b) What is the importance of experimental petrology to the field of igneous petrology?