

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 419

UNIT: 2

COURSE TITLE: SEQUENCE STRATIGRAPHY

INSTRUCTIONS: ANSWER ANY THREE QUESTIONS

TIME ALLOWED: 2 HOURS

DATE: 4TH MAY, 2018

1. Comment on the concept of base level changes using illustrative diagrams.
2. Discuss the hierarchy of systems based on cycle duration (boundary frequency).
3. Describe the applications of sequence stratigraphy to nonmarine (fluvial) settings
4.
 - a) All definitions of sequence stratigraphy emphasize four major points, enumerate the points.
 - b) What is the fundamental unit of sequence stratigraphy?
 - c) Differentiate between lithostratigraphy and sequence stratigraphy
 - d) Differentiate between transgression and regression
 - e) Define the following terms:
 - a. Sequence (i.e. depositional sequence)
 - b. Systems tract
 - c. Parasequence set
 - d. Parasequence
5.
 - a) State the seven sequence stratigraphic surfaces known to you.
 - b) Name four systems tracts you know .
 - c) Briefly explain any two systems tracts.
 - d) State Walther's Law of facies succession.
 - e) Give an overview of outcrop based sequence stratigraphic methodology.