



ELIZADE UNIVERSITY

FACULTY OF BASIC AND APPLIED SCIENCES

DEPARTMENT: PHYSICAL AND CHEMICAL SCIENCES

PROGRAMME: APPLIED GEOPHYSICS EXAM TITLE: DEGREE EXAMINATION

COURSE CODE & TITLE: AGY 304 – Stratigraphy

TIME ALLOWED: 2 Hrs 30 mins. SEMESTER/SESSION: 2nd SEMESTER/ 2020/2021

INSTRUCTIONS: Write your matric number on the question paper and cover page of the exam. booklet.

Answer any **FOUR (4)** questions.

HOD's SIGNATURE

- 1.(a) Differentiate between sedimentary facies and sedimentary depositional environment
(b) Explain the three kinds of sedimentary depositional environment
- 2.(a) State and explain Walther's law of facies to stratigraphy
(b) Enumerate at least eight importance of stratigraphy
- 3.(a) Discuss lithostratigraphy, biostratigraphy and chemostratigraphy as branches of stratigraphy.
(b) Explain the following:
 - i. Absolute and Relative dating
 - ii. Catastrophism and Uniformitarianism theory
- 4.(a) What is the importance of fundamental principles of stratigraphy?
(b) Explain the following principles of stratigraphy:
 - i.Principle of Lateral Continuity
 - ii.Principle of Fossil Succession
 - iii.Principle of Cross-Cutting Relationships
 - iv.Principle of Original Horizontality
 - v.Principle of Superposition
- 5 (a) Discuss the relevance of Sequence Stratigraphy to hydrocarbon prospecting
(b) List the sedimentary basins in Nigeria and discuss the stratigraphy and economic potential of one of the basins.
6. (a) What is an unconformity? Describe the types of unconformities with sketches
(b) Show your understanding of the following terminologies:
 - i.Lowstand system tract (LST)
 - ii.Retrogradational parasequence
 - iii.Transgressive system tract (TST)
 - iv.Clinofolds
 - v.Onlap
 - vi.Toplap