UNAM
UNIVERSITY OF NAMIBIA

FACULTY	Faculty of Agriculture, Engineering & Natural Sciences		
DEPARTMENT	Geosciences		
SUBJECT	Sedimentology And Sedimentary Basins		
SUBJECT CODE	GLP5901		
PAPER	1: combined theory & practical		
DATE	June 2025		
DURATION	**180 min (3 hours)**	**MARKS**	100

FIRST OPPORTUNITY EXAMINATION

Examiner/s: Dr C-I Uahengo

Internal Moderator: Dr M. Harris

External Moderator: Prof Mimonitu Opuwari

This question paper consists of 2 pages (including this one)

Instructions

- Closed book examination
- Answer all questions.
- Recommendation: read first all subordinate questions before you answer.

UNIVERSITY OF NAMIBIA EXAMINATIONS

1. Describe the processes of weathering, erosion, and sediment transport in the context of hydrocarbon reservoir formation. [10 marks]

2. Explain how fluvial and deltaic facies models aid in predicting reservoir distribution in hydrocarbon exploration. Include a labelled diagram. [10 marks]

3. Discuss how climatic conditions influence carbonate reservoir development. Use examples. [10 marks]

4. Compare and contrast foreland and rift basin evolution and their implications for petroleum system development. [10 marks]

5. Using examples from Namibia or Angola, explain how rifted volcanic margins influence hydrocarbon prospectivity. [10 marks]

6. Define sequence stratigraphy and explain how it is used to delineate reservoir and seal pairs in exploration. [10 marks]

7. Describe the role of basin modelling in evaluating hydrocarbon generation and migration. [10 marks]

8. What are the characteristics of good reservoir rocks and how are they identified in the subsurface? [10 marks]

9. Discuss the influence of diagenesis on reservoir quality with respect to clastic sedimentary rocks. [10 marks]

10. Illustrate and explain the stratigraphic framework of a transgressive-regressive cycle and how it impacts hydrocarbon trapping. [10 marks]

END OF EXAMINATION