

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
SCHOOL OF SCIENCE AND SCIENCE EDUCATION
DEPARTMENT OF GEOGRAPHY

FIRST SEMESTER 2011/2012 SESSION UNDERGRADUATE EXAMINATION

COURSE CODE: REM 511 (3 Units)

COURSE TITLE: Marine and Coastal Environments

INSTRUCTIONS: Answer any 4 questions

TIME ALLOWED: 2½ Hours

1. Identify and discuss the three types of reflectances from a water body and explain how aquatic plants concentration leads to varying reflectances.
2. Explain how the Visible, Near Infrared and Middle Infrared images could be used to distinguish between the open water, tidal flats and mudflats at coastal locations.
3. Discuss the role of Scatterometer and Radar Altimeter data in monitoring catastrophic ocean waves.
4. Using any specific examples, explain how Sea Surface Temperature (SST) data is used in monitoring and forecasting El nino events.
5. Describe and discuss how Synthetic Aperture Radar (SAR) data could be used in Coastal Bathymetry.
6. In the event of oil spill disaster in the ocean, explain how remote sensing techniques could be used in monitoring the dispersion of oil in the ocean/sea.