

**FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA**  
**SCHOOL OF NATURAL AND APPLIED SCIENCES**  
**DEPARTMENT OF GEOGRAPHY**

**FIRST SEMESTER 2012/2013 SESSION UNDERGRADUATE EXAMINATION**

**COURSE CODE:** REM 511 (3 Units)

**COURSE TITLE:** Marine and Coastal Environments

**INSTRUCTIONS:** Answer any 4 questions

**TIME ALLOWED:** 3 Hours

1. Discuss the sensor characteristics and environmental uses of data generated from any 3 of the following satellites:  
(i) Meteosat (ii) Nimbus-7 (iii) American SeaStar/OrbView-2 (iv) NOAA-J,K,L & M  
(v) Chinese Feng Yun
2. Explain how the different concentrations of solid pollutants in water could affect its reflectance.
3. Discuss how SAR data could be used to derive ocean bottom profile around coastal locations.
4. Sea ice can affect ocean navigation. How can remote sensing data be used in determining navigable areas in high latitudes ocean regions during winter.
5. Discuss how sea surface temperature data could be used to forecast El nino in a particular region of the world.
6. Discuss how SAR data could be used to monitor oil pollution in the ocean areas of the Niger Delta of Nigeria.