

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA

SCHOOL OF PHYSICAL SCIENCES

DEPARTMENT OF GEOGRAPHY

SECOND SEMESTER 2014/2015 SESSION UNDERGRADUATE EXAMINATION

COURSE CODE: REM520

COURSE TITLE: ADVANCED TOPICS ON RADAR (2 UNITS)

INSTRUCTION: Answer any **four (4)** Questions (Credits will be given for proper usage of relevant illustrations and diagrams)

Time Allowed: 2 Hours

1. Describe the main components of Side Looking Airborne Radar (SLAR) system and explain its problems and prospects in tropical applications.
2. Identify and describe the major factors that influence Backscattering Coefficients.
3. Using a specific Radar System, describe its applications in overcoming spatial and security challenges in Nigeria.
4. Discuss the fundamental procedures for Digital Image Processing and interpretation.
5. Explain in detail Synthetic Aperture Radar Interferometry (ifSAR) and describe the various types of interferometry.
6. Describe the principles of Radar polarimetry and explain its role in Natural Resource Monitoring and Management.