NATIONAL OPEN UNIVERSITY OF NIGERIA
FACULTY OF SCIENCES
DEPARTMENT OF ENVIRONMENTAL SCIENCE
Plot 91, Cadastral Zone, NnamdiAzikwe Expressway, Jabi, Abuja
2020_2 EXAMINATIONS

COURSE CODE: ESM392
COURSE TITLE: REMOTE SENSING
CREDIT UNIT: 2
TIME: 2 HOURS
Instruction: Attempt question number ONE (1) and any other THREE (3) questions. Question number one (1) is compulsory and carries 25 marks, while the other questions carry equal marks (15 each).

1a) What is Remote Sensing? (5marks)
b) According to Lillisand and Kiefer (1999) Electromagnetic Remote sensing involves 2 basic Processes. Explain them (3marks)
c) Describe the properties of electromagnetic radiation. (7marks)
d) Explain how Systematic Distortions can be corrected? (5marks)
e) Describe the contrast Enhancement Techniques (5marks)

2a) Differentiate between Rayleigh Scattering and Non selective scattering (5marks)
b) Describe atmospheric absorption (3 marks)
c) Discuss the energy interaction process with Earth surface features **(7marks)**

3) Describe the spectral reflectance of water (7 marks)
b.) What is a platform? (4 marks)
c) Briefly describe the Aerial Platforms (4 marks)

4a) Differentiate between airborne and spaceborne systems. (7marks)
b) Differentiate between airborne and spaceborne systems. (3marks)
c) Differentiate between Panchromatic and Multispectral imaging systems (5marks)

5a) Explain how Thermal Infrared Radiation can be Sensed (7marks)
b) What is Radar? **(4 marks)**
c) Describe the features of RADARSAT (4 marks)