DEPARTMENT OF SURVEYING AND GEOINFORMATICS

SCHOOL OF ENVIRONMENTAL TECHNOLOGY

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA

2017/2018 SESSION   **SECOND SEMESTER EXAMINATION**

SVG 225 REMOTE SENSING I   **Duration:** 2hours 30 Minutes

INSTRUCTION

*Attempt **all Questions** in Section A and Any other **Three Questions** in Sections B*

SECTION A -   *Answer All Questions in this Section A*

1. Differentiate between active and passive sensors and remote sensing classes.
   - (ii)   Give the name of Energy interactions in the atmosphere through spectral regions.
   - (iii)   **Specify** the means by which Space photograph is obtained.
2. **Name** the twice distance joining the source of EME (sun) and the sensor.

   (ii) **Mention** what happen when EMR is deflected in all directions within the feature.

3. **State** the following
   - (i)   Energy balanced equation
   - (ii)   Some reflectance characteristics
   - (iii)   The mathematical relationship of reflectance
   - (iv)   Four data categories, giving their utilizations.

SECTION B   *Answer any three (3) Questions in this section*

1. **Define** remote sensing in terms of
   - (i)   system and technology
   - (ii)   environmental factors and physical factors; and
   - (iii)   propagated signals
2. Give **details** on the following:
   - (i)   Principal uses of Remote Sensing
   - (ii)   Spectral bands using table
   - (iii)   Black body adjudged as a perfect absorber and also a perfect emitter of radiation.
3. **Define** the following acronyms:
   - (i)   EME, EMR, and RSS
   - (ii)   H, F, λ and E
4.
   - (i)   **Sketch** and **Explain** the medium of transmitting information from target to sensor
   - (ii)   **Specify** the fields that are in EMR