

**FEDERAL UNIVERSITY OF TECHNOLOGY, OWERRI
SCHOOL OF AGRICULTURE AND AGRICULTURAL TECHNOLOGY
DEPARTMENT OF SOIL SCIENCE AND TECHNOLOGY
2018 /2019 RAIN SEMESTER EXAMINATION**

COURSE: GIS APPLICATIONS IN AGRICULTURE (AGR 308)

INSTRUCTION: ANSWER ALL QUESTIONS TIME ALLOWED: 3 HOURS

(1a). Discuss the procedures you will use to enter Data in a GIS

(1b). Differentiate between Vector model and Raster Model giving examples for each

(2a) Briefly discuss the relevance of the electromagnetic spectrum in remote sensing technology

(2a) With respect to remote sensing studies, distinguish between:

(2bi) Active Sensor and Passive Sensor

(2bii) Space Platform and Terrestrial Platform

(3) Write short notes on the following:

(3i) Precision Farming (3ii) Drones in crop production

(3iii) CAM/SWAP (3iv) SMOS

(4) Explain the ways GIS can be used to determine the suitability of site and zoning in terms of developing Aquaculture.

(5i) DBMS means -----

(5ii) ----- are being incorporated into GIS to enhance its supremacy in spatial analysis

(5iii) As much as 70% of the data in Agricultural Extension have-----as their denominator making spatial analysis an essential tool.

(5iv) Two major categories of question in Extension research making use of GIS are ----- and -----

(5v). How has the farm settlements expanded since the last ten years? This question type in Extension research using GIS wants to determine patterns True or False?

(5 vi) " How many Extension Agents travel more than 6 km to visit the closest pineapple farmers in their zone" is a ----- question ?

(6i) GIS can build on forest inventory data to develop model for forest management activities (True/False).

(6ii) The modelling capabilities of GIS have not been quite effective in fire management (True/False).

(6iii) Remote sensing image of isolated shadows often provide a profile image of trees that are useful in

(6iv) GIS application in the acquirement of basic forest inventory data is not significant to timber management (True/False).

(6v) Remote sensing data on dryness of environment, wind speed and direction, temperature and precipitation is useful in _____

(6vi) GIS is a useful tool in transport management in forest reserve (True/False).

(6vii) Historical records for forest resource management have been used in GIS to identify changes in _____

(6viii) Remote sensing technique is limited to environmental assessment and monitoring in forest management (True/False).

(6ix) Routing map for forest management using GIS technology is created for _____

(6x) Aerial survey of forest use images taken from _____

(6xi) The use of satellite imagery in forest management through process of estimation is incomplete without ground truthing (True/False).