Department of Surveying and Geoinformatics
School of Environmental Technology
Federal University of Technology
Minna, Nigeria

SVG623: Photogrammetry and Remote Sensing II

Second Semester Examination, 2018/2019 Session

Postgraduate Diploma Class

DURATION: 2 Hours.

Instructions: Answer **Question 1** and any **other Two**

1a. In a bid to provide adequate infrastructure for the people of Niger State and to effectively manage her land asset, the State Government has realized that the population of the State has been increasing sporadically within the last 20 years without any structured system of tracking this increase and estimating the current population of the people of the State and their land consumption. As a Remote Sensing and Photogrammetry Consultant, you have been commissioned to develop a model of the spatio-temporal pattern of the urban sprawl into the State, using 5 years epoch. Describe the step by step procedure you will adopt for the smooth and successful execution of the task, stating the needed hardware and software, necessary algorithms and data type to be used and providing justification for each of the steps.

1b. Write short notes on image classification, describing the main techniques used in remote sensing

2a. Write Short notes on image segmentation and image registration.
2b. Discuss some of the factors that determine the quality of aerial photographs.
2c. With the aid of a chart, describe active and passive systems in remote sensing.

3a. Write short notes on Digital Image processing.
3b. What is noise in Image Processing? Write short notes on 5 different types of noise in DIP.
3c. Differentiate between image enhancement and image restoration

4a. Write short notes on the following using equations, and examples of applications:

i. Coplanarity condition
ii. Collinearity condition
iii. Scale restraint equation
iv. Block adjustment