

JOMO KENYATTA UNIVERSITY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF LAND RESOURCES, PLANNING AND MANAGEMENT
ALP2307: REMOTE SENSING 2

CAT 1

Time: 1.5Hrs

12th January 2018

Instructions: Answer all Questions

1. Define the following terms as used in remote sensing (5m)
 - a) Geostationary satellites
 - b) Spectral reflectance
 - c) Radiometric resolution
 - d) Push-broom scanning
 - e) False colour composite
2. Outline the principles of microwave remote sensing and mention two advantages (5)
3. Describe the multispectral scanning system, giving examples (5)
4. Give the main differences between Landsat MSS and Landsat TM data and how the differences may affect a typical forest classification of age and species classes (5)
5. Mention any 2 major applications of
 - a) NOAA AVHRR data
 - b) SPOT data(2)
6. Define (a) visual image interpretation (b) Image enhancement (4)
7. Briefly explain the main pre-process stages of remotely sensed images to enable quantitative data analysis (8)
8. Mention the role of contrast stretches in the image processing process. Specifically address why an analyst would pick a particular type of stretch and some of the dangers in selecting an inappropriate stretch for a given data (4)
9. Differentiate between supervised and unsupervised classification. (2)
10. Briefly describe the following terms: (4)
 - a) Filtering
 - b) Density slicing
 - c) Principal Component Analysis
 - d) NDVI
11. Explain how remote sensing can be applied in (6)
 - a) Monitoring and management of environmental hazards

OR

 - b) In wildlife and range management