24-12-2015

DOON UNIVERSITY, DEHRADUN

Ph.D. First Semester Final Examination, 2015

School of Environment & Natural Resources

Course: EES – 514: GEOMATICS

Time Allowed: 3 Hour *Maximum Marks: 30*

Note: Attempt All Questions from Sections A,B,C.

SECTION : A (Short Answer Type Questions/ to be answered in about 25/75/150 words. Attempt any 10 Questions. *(Marks:1x 10=10)*

1. What is Rayleigh scattering
2. What is "Bhuvan" in context of space technology?
3. Describe- map elements.
4. Define the term; ISRO, CSSTEAP, DOS and SAC?
5. What is the difference between visual and digital data interpretation?
6. Define point, line polygon?
7. What is the difference between platforms and sensors
8. Name one image enhancement technique?
9. Name one high pass filter?
10. Define NDVI?
11. Name one unsupervised image classification technique?
12. What is IFOV?

SECTION: B (Short Answer Type Questions to be answered in about 75-150 words. Attempt any 2 questions *(Marks: 2x5=10)*

1. What is electromagnetic spectrum? Which part of this can be used in passive remote sensing?
2. Explain geostationary orbit and satellite?
3. What is spectral signature? Define the characteristic curve.
4. Define the application of GPS in Remote Sensing.
5. Define spatial resolution of a sensor?
6. What do you understand by radiometric resolution of a sensor?
7. When do we use histogram equalization technique?
8. What is image histogram and define its importance?

SECTION: C (Long Answer Type Questions to be answered in about 750 words. Attempt any two Questions. *(Marks: 5 x2 =10)*

1. Explain in detail the thermal remote sensing? **Or** explain linear and non linear image enhancement techniques.
2. How Rs and GIS can be used in Disaster Management explain with example? **Or** explain the three types of supervised classification techniques?
3. Explain image filtering? Name two low pass filters?