Quiz-1 **30th Jan 2024**

INTERNATIONAL INSTITUTE OF INFORMATION TECHNOLOGY

Introduction to Spatial Science and Technology

Time:60 minutes ***Total Marks:* 30**

Section: I (5 Marks)

1. The object or feature on the Earth's surface that absorbs all radiation and do not reflect any signals in the infrared spectrum is ----------
2. Gaps in reflectance pattern in EMS are due to ----------
3. Suppose you have a digital image which has a radiometric resolution of 6 bits. What is the maximum value of the digital number which could be represented in that image?
4. What is the advantage of microwave data over optical data?
5. Why there is misclassification of classes in supervised classification approach despite taking homogenous training sets?

Section: II (10 Marks)

6. What is a geostationary satellite? Are the Landsat satellites geostationary?
7. How NDVI is used to monitor vegetation health?
8. Explain how the surface roughness and the wavelength of the incident radiation are affecting the reflectance of a given target.
9. What is user and producer accuracy in calculating kappa accuracy?
10. What elements of visual image interpretation would you consider differentiating between (i) evergreen and mangrove vegetation (ii) forest from agriculture and plantations.

Section-III (5 Marks)

11. Describe different types of Sensor resolution? Is it possible to increase one kind of resolution without influencing the others? Explain?

Section: IV (10 Marks)

12. Assume you have procured a raw satellite data for your project, describe various image processing steps involved in creating a thematic map out of satellite data.