Lwre.3209   Remote Sensing and GIS Applications (1+1)   Marks: 50
                                                                     Time: 2 hours

I   Fill in the blanks   (10x1=10)

1. A _____ is a computer system for capturing, storing, querying, analyzing, and displaying geospatial data.
2. An _____ remote sensing system generates and uses its own energy to illuminate the target and records the reflected energy which carries the information content or entropy.
3. Water surfaces will be delimited as dark areas in images recorded in the _____ as water has almost no reflection in that wavelength range.

   Match the following
4. Navigation satellite system   (a)   SPOT Satellite Sensor
5. Push broom scanning system   (b)   Equal-area
6. UTM conformal projection   (c)   IRNSS
                                     (d)   Local angles - Shapes

   State True or False
7. The Hyperion imaging spectrometer of the EO-1 satellite is a hyperspectral sensor.
8. A greater area can be covered in vertical rather than oblique remote sensing imagery.

   Define the following
9. PIXEL
10. Remote Sensing

II   Write short notes on ANY FIVE of the following   (5x2=10)

1. What is IFOV?
2. Explain Radar Image Distortions.
3. Write a brief note on image enhancement.
4. NAVSTAR, IRNSS and GLONASS
5. Write a brief note on geographic information systems (GIS).
6. What are the different types of scattering?
7. Distinguish between Passive and Active remote Sensing.

III   Answer ANY FIVE of the following   (5x4=20)

1. Write a note on Microwave Remote Sensing.
2. Distinguish between the spectral response of vegetation and water.
3. Explain basic classes of map projections and their properties.
4. Write a short note on advantages and disadvantages of raster data.
5. What are the various image interpretation keys?
6. Discuss image classification and its types.
7. Distinguish between the geometry of maps and vertical aerial photographs.

IV   Write an essay on ANY ONE of the following   (1x10=10)

1. Explain the different resolutions associated with remote sensing systems.
2. Explain the processes involved in remote sensing (characteristics of remote sensing systems).

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