Exam-1 4th Feb, 2021

Remote Sensing

Time: 45 minutes ***Total Marks: 25***

(Write answer on white sheet, scan, submit as RollNo-Exam1.Pdf by 11.15 am in the Portal)

I. Answer in one word / one sentence (10 marks / 8 minutes)

1. The key factor for the selection of a platform is the -------- that determines the ground resolution.
2. --------- type of scattering is responsible for the fog
3. Gaps in reflectance pattern in EMS are because of ----------
4. Weather satellites are ----------satellites
5. 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?
6. A pixel with brightness value of --------- appears as white on 8-bit image
7. The changes in the reflectivity/emissivity with time, is called:
   (a) Spectral variation (b) Spatial variation (c) Temporal variation
8. What type of EMR interaction occurs with water vapour and ozone?
9. The earth acts as a blackbody with a temperature of 300 K., what is the wavelength associated with the maximum spectral radiation flux for the earth?
10. State how fresh snow and bare asphalt interacts to incident radiation?

II. Answer in two/four sentences (4 Marks / 10 minutes)

1. What is adjacency effect? What is its impact on satellite data?
2. Explain how can you use the spectral reflectance curve to identify the moisture content in vegetation and soil?

III. 1. Differentiate between (3 important differences- tabular form) - (6 marks / 10 minutes)
   a. Pushbroom and whiskbroom scanners b. Optical and microwave sensors

IV. 1. Spectral response can be quite variable, even for the same target type and can also vary with time and location" Explain with TWO examples – (5 marks/ 10 minutes)

(Approx. 38 minutes for writing and rest of the time for scanning and uploading)