2008

M.Sc.

2nd Semester Examination

REMOTE SENSING & GIS

PAPER—V (RG—1201 & 1202)

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Write the answers of questions for each module in separate books.

Digital Image Processing

RG—1201 (Full Marks : 20)

Answer any *two* questions.

1. (a) What are the differences between a digital image and an analog image? How the digital images are generated by a satellite? What are the various data formats of satellite images?

(b) What is a histogram? What is its use in digital image processing? 5+5

2. (a) What are the different types of corrections applied to satellite images? Briefly describe each of these.

(b) What is the use of contrast enhancement? What is the principle of histogram equalization? 5+5

3. What is 'image fusion'? Write different steps of image fusion. What are the applications of data fusion? Explain IHS model. 2+4+2+2

4. What is spatial filtering? What is convolution filters? Write about different types of convolution filters for interpretation of RS data. Write short note on 'Tasseled Cap Transformation'. 1+2+4+3

Infomation Extraction, Image Processing System consideration

RG—1202 (Full Marks : 20)

Answer any *two* questions.

1. What is feature selection? Give a brief account of statistical feature selection. What is 'Bar graph' spectral plot? 2+5+3

2. Explain the chain method of unsupervised classification. What is the basic principle of parallelopiped classification algorithm? 6+4

3. Explain spectral change vector analysis. Give a brief account of image algebra. Change detection monitoring its advantages and disadvantages. 4+4+2

4. Write short notes on any *two* of the following : 2×5

   (a) Classification algorithms ;

   (b) Image rectification and restoration ;

   (c) Unsupervised classification ;

   (d) Quantization level of the sensor system.

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