

BACHELOR OF CIVIL ENGINEERING (EVENING) EXAMINATION 2018 (old)
(Fifth Year, First Semester)

REMOTE SENSING
(Elective I)

Time: Three Hours

Full Marks 100
(50 marks for each part)

Use a separate Answer-Script for each part

Question No.	Part I (50 Marks)	Marks
Answer any TWO questions out of three from this Part		
1	(a) What is called reference data in remote sensing? Why reference data is essential for remote sensing? Give three examples of reference data. Explain which one of these three is more acceptable and why?	3+5+3+4=15
	(b) What is called geo-coded image? Why it is required to be geo-coded? How an image can be geo-coded?	1+2+2=5
	(c) What is called 'Ground Control Point (GCP)'? Why GCP is required in case of satellite imageries? How the GCP becomes useful for satellite imageries?	1+2+2=5
2	(a) Why visual interpretation of satellite image is necessary? What are the elements of visual image interpretation? Explain briefly.	3+10=13
	(b) What is the basic information we can have from a FCC?	5
	(c) Why the vegetation shows red in FCC?	2
	(d) When a play ground will not show red colour in FCC?	3
	(e) How can you identify (visually) oxbow lake in FCC?	2
3	(a) What is the important parameter for digital image classification? What are the different parts of 'image enhancement'? Why the 'image enhancement' is required for satellite image?	1+2+2=5
	(b) What is geometric correction of a satellite image? Why it is essential?	3+2=5
	(c) Why "Contrast Stretching" of a satellite image is required? Draw and discuss the different principles of "Contrast Stretching".	1+4=5
	(d) Differentiate between 'supervised' and 'unsupervised' classification.	5
	(e) A group of same species of trees existing on both side of a hill. The group of trees on one side of the hill is showing different reddish tone than the trees on other side of the hill. Why? How do you identify that they are of same species?	2+3=5

B. CIVIL ENGINEERING (EVENING) 5TH YEAR 1ST SEMESTER 2018
REMOTE SENSING (ELECTIVE – I)

Time: 3 Hours

Full Marks: 100
(50 marks for each part)

Part II

Use Separate Answer scripts for each Part
Answer ALL Questions

1. Write Short notes on – 6×4 = 20
 - a. Remote Sensing
 - b. Blue colour of sky
 - c. Rain bearing clouds look black
 - d. Atmospheric Windows
 - e. Atmospheric absorption of EM waves
 - f. Spectral Reflectance

 2. State their major differences between – 4+6+4+4
 - a. Rough and Smooth surface in context with EM reflection
 - b. Scattering of EM waves
 - c. Reflective and Thermal Infra-Red
 - d. Passive and Active Remote Sensing

 3. Name the major steps associated with satellite remote sensing. Neither small nor large wavelengths of radiation are suitable for satellite remote sensing – Justify the statement. 4+8
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