Ref. No. Ex/CE/5/T/502D/2017(S)

BACHELOR OF CIVIL ENGINEERING (EVENING) EXAMINATION 2017

(Fifth Year, First Semester, Supplementary)

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	Marks
		Answer any TWO questions out of three from this Part	
1	(a)	Why visual interpretation of satellite image is necessary? What are the elements of visual image interpretation? Explain briefly.	3+10=13
	(b)	What are 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
2	(a)	Write a short note on 'Image Enhancement' and its importance.	6
	(b)	What is spectral reflectance? How water body, vegetation, and soil are separated out?	3+7=10
	(c)	Define 'Ground Control Points (GCP)' and discuss its function. How many GCP, in case of minimum numbers, are required for geometric correction of an image? Explain briefly.	6+3=9
3	(a)	Define 'Spectral Response Patterns' and 'Spectral Signature'.	2x2=4
	(b)	What is called reference data in remote sensing? Give three examples of reference data. Which one is most authentic reference data and why?	3+3+3=9
	(c)	What is the utility of reference data in remote sensing?	3
	(d)	Satellite image is raster data or vector data?	1
	(e)	What is called Geographic Information System (GIS)? Explain briefly.	2
	(f)	Compare between Land Survey, Photogrammetry, and Satellite Remote Sensing?	6

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B. CIVIL ENGG (EVENING) 5TH YEAR 1ST SEMESTER SUPPLEMENTARY 2017
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. Name the seven major steps of remote sensing process. Also arrange them in order. 8
2. Write the names of the electromagnetic spectrum, which are used in Remote Sensing in ascending order of wavelength 4
3. 3+3
   a. What are the factors that influence the amount of scattering?
   b. Why do the rain potential clouds appear black in the sky?
4. 2+2
   a. Name any one atmospheric absorbent of EM waves and mention which range of wave it absorbs.
   b. What is the atmospheric window?
5. Name different types of reflection. State which type is noticed under what conditions. Also mention which among them is best suitable for remote sensing study. 2+2+1
6. Define Active and Passive Sensor with one example of each 2+2
7. 1+(2+2+1)+2
   a. What is the orbit of a satellite?
   b. Name the two types of satellites on the basis of orbit characteristics. State their major difference and mention which one is more suitable for earth resource remote sensing.
   c. Why does a particular type of satellite is called sun-synchronous?
8. 2+4
   a. Revisit period may be less than or equal to the orbital period. – Justify the statement
   b. Name the different types of resolution associated with remote sensing
9. State three major points of why along track scanners are preferred over across track scanners for remote sensing 3
10. Write the full form of IFOV & AFOV? 2