Ref. No.: EX/CE/T/416D/2017 (S)

B. CIVIL ENGG 4TH YEAR 1ST SEMESTER SUPPLEMENTARY EXAMINATION 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. Write the full form of IFOV & AFOV? 2
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. Name the seven major steps of remote sensing process. Also arrange them in order. 8
5. 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?
6. 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
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. Define Active and Passive Sensor with one example of each 2+2
9. 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
10. State three major points of why along track scanners are preferred over across track scanners for remote sensing 3

Ref. No. Ex/CE/T/416D/2017(S)

BACHELOR OF CIVIL ENGINEERING EXAMINATION 2017

(Fourth 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)	Define 'Remote Sensing' and 'Satellite Remote Sensing'.	2+2=4
	(b)	Discuss on 'Electromagnetic Spectrum' with a neat sketch.	9
	(c)	Explain briefly about the different types of 'Energy Interactions in the Atmosphere'	9
	(d)	Define 'Spectral Reflectance' and express its quantification.	3
2	(a)	What is FCC? Make a list of the basic information which can be obtained from a FCC.	2+5=7
	(b)	Why the vegetation shows red in FCC?	2
	(c)	How can you identify the river flood plain from FCC?	3
	(d)	How can you identify (visually) oxbow lake in FCC?	2
	(e)	How the 'flowing water' and 'stagnant water' bodies can be differentiated from FCC?	2
	(f)	How do you identify the natural and artificial features through satellite imageries?	3
	(g)	How do you differentiate cloud coverage from snow coverage in satellite imageries?	3
	(h)	A green play ground is not showing red colour in FCC. Explain the reason behind it.	3
3	(a)	Explain fundamentals of visual image interpretation and its importance. What are the elements of visual image interpretation? Explain briefly.	5+10=15
	(b)	What is the importance of the temporal aspect of image interpretation?	5
	(c)	What are the different applications of remote sensing in natural resource management?	5