

B.E. CIVIL ENGINEERING (FOURTH YEAR, FIRST SEMESTER, SUPPLEMENTARY) EXAMINATION 2018 (OLD)
(Fourth Year, First Semester, Supplementary, Old)

REMOTE SENSING

Time: Three Hours

Full Marks 100
(50 marks for each part)

Use a separate Answer-Script for each part

Q No.	Part I	Marks
<i>Answer any two questions from this Part</i>		
1	(a) Write short notes on: 'Spectral Reflectance', 'Global Positioning System (GPS)', and 'Digital Number'. (b) Draw a typical 'spectral reflectance envelope' for deciduous and coniferous type tree. (c) Why 'Ground Truth Verification' is essential in remote sensing? (d) In which situation the reflectance value of same species of tree in a particular forest in a satellite image taken in a particular time may show different? How do you identify that they are of same species?	2x3=6 10 5 2+2=4
2	(a) Write a short note on 'Edge Enhancement' filter and its utility. Also explain the advantage of this filter. (b) Draw a typical 'spectral reflectance curve' for vegetation, soil and water. (c) What is the difference between 'spectral reflectance envelope' and 'spectral reflectance curve'? Why this difference occurs?	10 10 5
3	(a) What is called training stage in digital image processing? How it can perform? (b) Explain different types of classifiers with sketches. (c) "Spectral reflectance of two different features may be same, and similar features may be different". Explain its correctness. (d) Explain its correctness.	6 2+4=6 8 5
4	(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? (b) What are the elements of visual image interpretation? Explain briefly.	3+5+3+4=15 10

B. CIVIL ENGG 4TH YEAR 1ST SEMESTER SUPPLEMENTARY EXAMINATION 2018 (OLD)
REMOTE SENSING

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 the following – 5
 - a. IFOV
 - b. AFOV
 - c. NIR
 - d. FCC
 - e. MSS

 2. Explain the following statements in context of Electromagnetic Imaging – 4×4
 - a. Rain potential clouds appear black in the sky
 - b. Sky appears blue in a sunny day
 - c. A surface of sand can generate both specular and diffuse reflection
 - d. Every orbital period is a revisit period but the converse is not true

 3. Write three major differences between – 3×3
 - a. Two types of satellites
 - b. Along track and across track scanning
 - c. Active and Passive Sensing

 4. What is atmospheric scattering? What factors influence that? Name different types of scattering mentioning their major differences and citing one example each 2+3+(1+6+3)

 5. Name and Define the different types of resolution associated with remote sensing 1+4
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