

**MASTER OF CIVIL ENGINEERING EXAMINATION 2018**  
(First Year; First Semester)

**REMOTE SENSING & ITS APPLICATION**

Time: Three Hours

Full Marks 100  
(Part I: 60 Marks  
Part II: 40 Marks)

Use a separate Answer-Script for each part

Question No.	Part I (60 Marks)	Marks
Answer any THREE questions from this Part		
1	(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?	3
	(c) How can you identify (visually) oxbow lake in FCC?	2
	(d) How the 'flowing water' and 'stagnant water' bodies can be differentiated from FCC?	2
	(e) How do you differentiate cloud coverage from snow coverage in satellite imageries?	3
	(f) A green play ground is not showing red in FCC. Explain the reason behind it.	3
2	(a) How do you select different bands and colours for soil, vegetation and water? Explain briefly.	12
	(b) "Spectral reflectance of two different features may be same, and similar features may be different". Explain its correctness.	5
	(c) How do you identify the different kinds of vegetations in the satellite imageries?	3
3	(a) Why visual interpretation of satellite image is necessary? What are the elements of visual image interpretation? Explain briefly	3+10=13
	(b) How do you decide the time scale for a time series analysis?	2
	(c) What is called image manipulation? Explain briefly. Give an example of image manipulation and explain its utility.	4+1=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?	3+5+3+4=15
	(b) Differentiate between 'supervised' and 'unsupervised' classification. Which one is preferable?	4+1=5

**M.E. CIVIL ENGINEERING FIRST YEAR FIRST SEMESTER EXAM 2018**  
**REMOTE SENSING & ITS APPLICATION**

**Time: 3 Hours**

**Full Marks: 100**  
**(40 marks for this part)**

**Part II**

**Use Separate Answer scripts for each Part**  
**Answer ANY TWO Questions**

1. Write Short notes on – 5×4 = 20
    - a. Reyleigh Scattering
    - b. Why Rain bearing clouds appear black
    - c. Atmospheric Windows
    - d. Ground ControlPoints
    - e. Spectral Reflectance
  
  2. State their major differences between – 5×4 = 20
    - a. Rough and Smooth surface in context with EM reflection
    - b. Geostationary & Polar Satellite
    - c. Reflective and Thermal Infra-Red
    - d. Passive and Active Remote Sensing
    - e. Revisit period & Time period of a satellite
  
  3.
    - a) Name different types of resolution of a remote sensor. Explain any two of them 2+8
    - b) Why Radiometric Correction is required for a sensor ? How is it done ? 2+3
    - c) Name different types of Digital Image Classification techniques and state major difference between them 1+4
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