M. CIVIL ENGINEERING 1ST SEMESTER EXAMINATION 2017
REMOTE SENSING & ITS APPLICATION

Time: 3 Hours

Full Marks: 100
(40 marks for this part)

Part I
Use Separate Answer scripts for each Part
Answer ALL Questions

1. Explain the following –
   a. Sky normally appear Blue but appear red during sunrise or sunset
   b. Type of Reflection is not the property of reflecting surface alone.

   4+4

2. State their major differences between –
   a. Polar Satellite and Geo-stationary Satellite
   b. Revisit Period and Time Period of a Satellite
   c. Along Track and Across Track Scanning
   d. Scattering of EM waves
   e. Near and Far Infra-Red

   5×4

3. Write about Resolution of a Sensor

   12

MASTER OF CIVIL ENGINEERING EXAMINATION 2017
(First Semester)

REMOTE SENSING & ITS APPLICATION

*Time: Three Hours

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

Use a separate Answer-Script for each part

Question No.		Part II (60 Marks)	Marks
		Answer Question No 1 as compulsory and any TWO questions from 2, 3 and 4	
1		Discuss on 'Electromagnetic Spectrum' with a neat sketch.	10
2	(a)	Draw a typical 'spectral reflectance envelope' for deciduous and coniferous type tree.	10
	(b)	Draw a typical 'spectral reflectance curve' for vegetation, soil and water.	10
	(c)	What is the difference between 'spectral reflectance envelope' and 'spectral reflectance curve'? Why this difference occurs?	5
3	(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)	When a play ground will not show red colour in 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 in FCC. Explain the reason behind it.	3
4	(a)	Write a short note on 'Edge Enhancement' of an image and its utility.	6
	(b)	What is called training stage in digital image processing? How it can perform?	2+4=6
	(c)	Explain different types of classifiers with sketches.	8
	(d)	"Spectral reflectance of two different features may be same, and similar features may be different". Explain its correctness.	5