Roll No.		Total No. of Pages :	02
Total No. of Questio	ons:08		
M.Tech. (Elect	tronics & Communic	ication Engineering) (Sem.–3)	
	REMOTE SE	ENSING	
	Subject Code:M M.Code:	ITEC-PE5C-18 76586	
	Date of Examinati	ion:24-12-22	
Time: 3 Hrs.		Max. Marks: 6	0

INSTRUCTIONS TO CANDIDATES :

- 1. Attempt any FIVE questions out of EIGHT questions.
- 2. Each question carry TWELVE marks.
- 1. a) Describe how the geometrical and electrical properties of the target influence the Radar return?
 - b) Write down the parameters which control the ground resolution cell size of a SLR system and how they affect the Range and Azimuth resolution?
- 2. a) What is remote sensing? Explain electromagnetic spectrum.
 - b) What are the non-systematic geometric errors encountered in the digital remote sensing data?
- 3. a) What is spectroscopy and how it is related with hyper spectral remote sensing?
 - b) Briefly discuss the advantages of hyper spectral remote sensing over the multispectral remote sensing.
- 4. a) Discuss the various energy interaction processes in the atmosphere.
 - b) Differentiate Whiskbroom and Pushbroom sensors. Further, explain Geosynchronous and Geostationary orbit.
- 5. a) Briefly discuss about the calibration of thermal sensors and geometric characteristics of scanner.
 - b) Write short notes on the radiometric correction and image enhancement.

- 6. A transmitter sends a massages containing six letters a_1 , a_2 , a_3 , a_4 , a_5 and a_6 with probability 0.1, 0.4, 0.06, 0.1, 0.04, 0.3 respectively. If the message is compressed with Huffman coding, determine encoding bits for each of the letters. Also determine compression ratio.
- 7. a) Write short notes on LANDSAT and SPOT.
 - b) An image is 2400 pixels wide and 2400 pixels high. The image was scanned at 300dpi. What is the physical size of the image?
- 8. a) Discuss the role of remote sensing to improve land fertility and to curb the deforestation.
 - b) Write down the role of remote sensing to control the environment pollution and in disaster management.

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.