

Name :  
Reg No :

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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY  
07 THRISSUR CLUSTER

**SECOND SEMESTER M.TECH. DEGREE EXAMINATION APR 2018**  
**CIVIL ENGINEERING DEPARTMENT**  
**WATER RESOURCES AND HYDROINFORMATICS**  
**07CE6406 REMOTE SENSING**

Time : 3 hours

Max.Marks: 60

Answer all six questions. Part 'a' of each question is compulsory.

Answer either part 'b' or part 'c' of each question

Q.no.	Module 1	Marks
1a	What is Photogrammetry? Explain the basic geometric characteristics of aerial photography.	4

**Answer b or c**

- |   |   |   |
|---|---|---|
| b | Explain about flight planning.  | 5 |
| c | Assume that a vertical photograph was taken at a flying height of 5000 m above sea level using a camera with 152 mm focal length lens.<br>a) Determine the photo scale at points A and B, which lie at elevations of 1200m and 1960m respectively.<br>b) What ground distance corresponds to a 20.1mm photo distance measured at each of these elevations | 5 |

Q.no.	Module 2	Marks
2a	What is an atmospheric window? Explain its significance in remote sensing.	4

**Answer b or c**

- |   |  |   |
|---|--|---|
| b | Discuss the ideal and real in remote sensing | 5 |
| c | Write short note on GPS.                     | 5 |

Q.no.	Module 3	Marks
3a	Write short note on along track and across track scanners.	4

**Answer b or c**

- |   |   |   |
|---|---|---|
| b | Discuss the principles behind thermal and microwave imaging system. | 5 |
| c | List out the elements of image interpretation                       | 5 |

<b>Q.no.</b>	<b>Module 4</b>	<b>Marks</b>
<b>4a</b>	Discuss about the radiometric corrections applied in image restoration.	<b>4</b>
<b>Answer b or c</b>		
<b>b</b>	Explain about the spatial feature manipulation technique used in image enhancement.	<b>5</b>
<b>c</b>	Explain the various noise removal techniques.	<b>5</b>
<b>Q.no.</b>	<b>Module 5</b>	<b>Marks</b>
<b>5a</b>	Explain in detail about principle and canonical component analysis.	<b>5</b>
<b>Answer b or c</b>		
<b>b</b>	Differentiate between supervised and unsupervised classification.	<b>7</b>
<b>c</b>	What is IHS transformation?	<b>7</b>
<b>Q.no.</b>	<b>Module 6</b>	<b>Marks</b>
<b>6a</b>	Write short note on role of remote sensing in landuse classification	<b>5</b>
<b>Answer b or c</b>		
<b>b</b>	Explain the role of remote sensing in flood mapping.	<b>7</b>
<b>c</b>	Explain in detail about the application of remote sensing in snow mapping.	<b>7</b>