PRESIDENCY UNIVERSITY
BENGALURU

SCHOOL OF ENGINEERING

TEST - 1

Even Semester: 2018-19   **Date**: 06 March 2019

Course Code: PET 320   **Time**: 1 Hour

Course Name: Remote Sensing & GIS   **Max Marks**: 40

Programme & Sem: B.Tech (DE) & VI Sem   **Weightage**: 20%

Instructions:
  (i)   *Read the question properly and answer accordingly.*
  (ii)   *Question paper consists of 3 parts.*

Part A

Answer **all** the Questions. **Each** question carries **four** marks.   (3Qx4M=12)

1. Draw a neat diagram of Theoretical scheme of Sensor -Target Interaction.

2. Explain about the microwave remote sensing.

3. What are the advantages of Universal Transverse Mercator (UTM) Grid?

Part B

Answer **both** the Questions. **Each** question carries **eight** marks.   (2Qx8M=16)

4. Write down the Reasons for using computers in the process of making maps?

5. Explain the different Electromagnetic spectral regions with their wavelength and remarks.

Part C

Answer the Question. Question carries **twelve** marks.   (1Qx12M=12)

6. Explain in detail Electromagnetic Remote Sensing Process.

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TEST - 2

Even Semester: 2018-19

Course Code: PET 320

Course Name: Remote Sensing & GIS

Program & Sem: B.Tech & VI Sem (DE)

Date: 16 April 2019

Time: 1 Hour

Max Marks: 40

Weightage: 20%

Instructions:
 (i) *Read the question properly and answer accordingly.*
 (ii) *Question paper consists of 3 parts.*

Part A

Answer **all** the Questions. **Each** question carries **four** marks.   (3Qx4M=12)

1. Write a brief overview of the most important satellite system parameters.

2. Write the characteristics of IRS series and AEM satellites.

3. Name the details that are generally annotated on the satellite imagery.

Part B

Answer **both** the Questions. **Each** question carries **eight** marks.   (2Qx8M=16)

4. Explain the detailed method of terrain study.

5. With a neat sketch describe the basic steps of supervised classification.

Part C

Answer the Question. The Question carries **twelve** marks.   (1Qx12M=12)

6. Explain the basic elements of image interpretation.

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END TERM FINAL EXAMINATION

Even Semester: 2018-19   **Date**: 25 May 2019

Course Code: PET 320   **Time**: 3 Hours

Course Name: Remote Sensing & GIS   **Max Marks**: 80

Program & Sem: B.Tech & VI Sem   **Weightage**: 40%

Instructions:
   (i)   Read the question properly and answer accordingly.
   (ii)   Question paper consists of 3 parts.

Part A

Answer **all** the Questions. **Each** question carries **five** marks.   (4Qx5M=20M)

1. Match the following electromagnetic spectral regions with their wavelengths

Region		Wavelength
i.	Gamma Ray	a. 3 to 5 µm
ii.	X-ray	b. <0.03 nm
iii.	Visible	c. 0.1 to 30 cm
iv.	Thermal IR	d. 0.03 to 3.0 nm
v.	Radar	e. 0.4 to 0.7 µm

2. Match the following topographic and vegetation features with their reflection characteristics

Feature		Reflection Characteristics
i.	Flat Surface	a. Relatively high return due to orientation effects
ii.	High relief	b. High returns with increasing density of occurrence
iii.	Bush	c. No return from shadow areas
iv.	Natural Grass	d. Diffuse reflections
v.	Sloping surface facing camera	e. Specular reflection

3. Match the following satellite - features with their value

Satellite - Feature		Reflection Characteristics
i.	SPOT – Repeat Cycle	a. 22 days
ii.	IRS – Repeat Cycle	b. 904 Km
iii.	AEM – Repeat Cycle	c. 16 days
iv.	AEM – Altitude	d. 26 days
v.	IRS - Altitude	e. 620 Km

4. Fill in the blanks / Full form of the following:

   i. _____ constitutes the language of simple geography as well as automated geography.

   ii. IFOV: _____.

   iii. _____ are the things in the real world.

   iv. WQI: _____.

   v. Geostationary are at an altitude of about _____.

Part B

Answer **all** the Questions. **Each** question carries **eight** marks.   (5Qx8M=40M)

5. Compare raster and vector data models.

6. i. What capabilities GIS offers?   [3M]
   ii. Make schematic representation of Four Ms.   [3M]
   iii. Name the elements that are essential for effective GIS operations.   [2M]

7. With the help of a flowsheet give an overview of the linkage of remote sensing and GIS.

8. Explain the geometrical characteristics of radar image

9. What is Map Scale? Explain the three ways in which it can be expressed?

Part C

Answer **both** the Questions. **Each** question carries **ten** marks.   (2Qx10M=20M)

10. Explain in detail Electromagnetic Remote Sensing Process.

11. The grid based GIS spatial data can be stored, manipulated, analyzed and referenced basically in any one of the three models. What are those three models? Explain them.