NSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)
Dundigal, Hyderabad - 500043

CIVIL ENGINEERING

TUTORIAL QUESTION BANK

Course Name	:	**INTRODUCTION TO REMOTE SENSING**
Course Code	:	**Value Added Course**
Class	:	B. Tech
Branch	:	CE
Year	:	2018-19
Course Coordinator	:	Mr. Srinivas Angadi, Assistant Professor, Department of Civil Engineering
Course Faculty	:	Mr. Srinivas Angadi, Assistant Professor, Department of Civil Engineering

COURSE OBJECTIVES:
The course should enable the students to:

I	Understand and apply the physical principles underlying remote sensing systems
II	Recognize the importance of primary remote sensing data collection systems
III	Analyze and explain remote sensing purposes, advantages, and limitations
IV	Apply principles of Remote sensing to collect, map and retrieve spatial information.

TUTORIAL QUESTION BANK

S.No	QUESTIONS	Blooms Taxonomy Level	Course Learning Outcomes
UNIT I			
Part - A (Short Answer Questions)			
1	What is Remote Sensing?	Remember	CACE804.01
2	What is the Process involved in Remote Sensing?	Remember	CACE804.01
3	Draw a neat sketch of Schematic representation of remote sensing technique.	Remember	CACE804.01
4	What do you mean by Electromagnetic energy or electromagnetic radiation (EMR)?	Remember	CACE804.02
5	Give Electro-magnetic energy (E) can be expressed either in terms of frequency (f) or wave length (λ) of radiation as _____	Remember	CACE804.02
6	What is Electromagnetic radiation spectrum?	Remember	CACE804.02
7	List the different principles involved in Remote Sensing?	Remember	CACE804.01
8	Elaborate the main stages in remote sensing	Remember	CACE804.01
9	Draw a neat sketch showing the important stages in remote sensing	Remember	CACE804.01
10	Define passive remote sensing.	Remember	CACE804.01
11	Define active remote sensing.	Remember	CACE804.01
12	Draw a neat sketch of Schematic representation of passive and active remote sensing	Remember	CACE804.01
13	List any two Remote sensing platforms.	Remember	CACE804.01
14	What is Ideal Remote Sensing System?	Remember	CACE804.01

15	What is Space-borne Remote Sensing?	Remember	CACE804.01
16	What is stereoscope?	Remember	CACE804.02
17	What is meant by Relief Displacement?	Remember	CACE804.03
18	Elucidate the basic geometrical elements of a vertical aerial photograph with a neat sketch.	Remember	CACE804.03
19	Distinguish the difference between amap and an ortho photo and describe the following terms: GCP, mosaic, Stereo pair, Fiducial marks.	Remember	CACE804.02
20	Discuss how the height of an object on the terrain can be determined using stereo parallax measurements.	Remember	CACE804.02
21	Elucidate the basic geometrical elements of a vertical aerial photograph with a neat sketch.	Remember	CACE804.02
22	What is low oblique photograph and high oblique photograph?	Remember	CACE804.03
23	Define tilt displacement?	Remember	CACE804.03
24	Define fudicial point, scale and relief displacement	Remember	CACE804.02
25	Define the Scale of a vertical aerial photograph?	Remember	CACE804.02
Part - B (Long Answer Questions)			
1	Explain in detail the different components of an ideal remote sensing system with a neat sketch.	Remember	CACE804.01
2	Discuss briefly the characteristics of Real Remote Sensing Systems with suitable examples.	Understand	CACE804.01
3	Elaborate the advantages and disadvantages of Remote Sensing with examples.	Understand	CACE804.01
4	What is Electromagnetic energy? How it is associated with remote sensing?	Remember	CACE804.02
5	Explain in detail about Electro-Magnetic Radiation (EMR) spectrum with a neat sketch showing the process involved in it?	Understand	CACE804.02
6	What are the different energy sources and radiation principles involved in remote sensing?	Understand	CACE804.02
7	What do you understand by energy interactions in the atmosphere justify your answer with proper example.	Remember	CACE804.02
8	Explain in detail about Rayleigh scattering phenomena, which is associated with remote sensing	Remember	CACE804.01
9	Explain in detail about Mie Scattering phenomena, which is associated with remote sensing	Remember	CACE804.01
10	Explain in detail about Non-selective scattering phenomena, which is associated with remote sensing	Remember	CACE804.01
11	What is Absorption? How Absorption process in important in remote sensing technique?	Understand	CACE804.01
12	What are the different factors will be considered for sensor selection for remote sensing. Explain in detail.	Understand	CACE804.01
13	What do you understand by energy interactions with earth surface features?justify your answer with proper example	Remember	CACE804.01
14	What do you understand by the terms Diffuse, Reflection and scattering. Explain briefly.	Understand	CACE804.02
15	What is the importance of spectral reflectance curves? Explain in detail.	Remember	CACE804.02
16	What is photo scale? Discuss with an example.	Remember	CACE804.03
17	If the distance of a line on the photographic known as 1 cm, what is it's Elucidate the basic geometrical elements of a vertical aerial photograph with a neat sketch.	Understand	CACE804.02
18	Describe the following terms: GCP, mosaic, Stereo pair, Fiducial marks.	Understand	CACE804.02
19	Discuss how the height of an object on the terrain can be determined using stereo parallax measurements.	Remember	CACE804.03

20	Illustrate how the difference in elevation displaces the position of a photographic image.	Understand	CACE804.03
21	Discuss about various types of Aerial Photogrammetric techniques.	Remember	CACE804.02
22	What is Fudicial Centre? How it is determined explain with a neat diagram.	Understand	CACE804.02
23	What are the basic advantages of vertical air photos?	Remember	CACE804.02
24	Discuss the parallax measurement of height determination.	Understand	CACE804.03
25	What is the difference between distortion and displacement?	Remember	CACE804.02
Part - C (Critical Thinking Questions)			
1	Distinguish an oblique and highly oblique Aerial photograph?	Remember	CACE804.02
2	What are factors effecting in aerial photographs?	Understand	CACE804.02
3	Discuss the role of disaster management authorities in disaster	Understand	CACE804.03
4	Discuss the role and functions of a Disaster Manager.	Remember	CACE804.03
5	Explain what is meant by Photogrammetric? What are the uses of Aerial and/or Satellite Photogrammetry?	Understand	CACE804.03
6	What is difference between an oblique photograph and panoramic photograph?	Remember	CACE804.02
7	Relief Displacement exists because photos are a perspective projection.	Understand	CACE804.02
8	Explain how can this be used to determine the height of an object on the terrain?	Remember	CACE804.02
9	Discuss how the height of an object on the terrain can be determined using stereo parallax measurements.	Understand	CACE804.02
10	Discus the different types of aerial photograph.	Remember	CACE804.02
11	Illustrate end lap, side lap, and forward lap.	Understand	CACE804.02.
UNIT II			
Part – A (Short Answer Questions)			
1	What are satellites and orbits?	Remember	CACE804.04
2	What are the different types of orbits?	Remember	CACE804.04
3	List the Characteristics of satellite orbits.	Understand	CACE804.04
4	What do you mean by Geostationary or geosynchronous orbit?	Remember	CACE804.04
5	What do you mean by Polar (or Near Polar) orbits?	Remember	CACE804.04
6	What do you mean by Sun-synchronous orbits?	Understand	CACE804.04
7	Write a short note on Remote sensing application.	Remember	CACE804.05
8	Define the term Spatial resolution	Remember	CACE804.05
9	What do you mean by Spectral resolution	Understand	CACE804.05
10	What is the Difference between Temporal and Radiometric resolution	Remember	CACE804.05
11	List the different types of resolutions involved in remote sensing	Understand	CACE804.06
12	What do you mean by IFOV variation w.r.t angle of view and altitude of the sensor	Remember	CACE804.07
13	What is Signal-to-Noise Ratio?	Remember	CACE804.06
14	What is Trade-offs between spatial, spectral and radiometric resolution	Remember	CACE804.07
15	What is repeat cycle of a satellite?	Remember	CACE804.07
16	Define Remote Sensing.	Understand	CACE804.05
17	Define Scattering.	Remember	CACE804.05
18	What is active remote sensing and passive remote sensing?	Remember	CACE804.05
19	Explain about two energy sources available for earth passive remote sensing and elucidate with their spectral characteristic curves.	Understand	CACE804.05
20	Describe spectral properties of water bodies and how these can be used to differentiate pure and sediment water.	Remember	CACE804.05
21	What is passive remote sensing?	Remember	CACE804.05
22	Define Ground control points.	Remember	CACE804.06
23	Which part of the EMR spectrum is used for radar remote sensing.	Understand	CACE804.06

24	Which part of the EMR spectrum is used for optical remote sensing.	Remembers	CACE804.06
25	In earth remote sensing, What are the visible wavelength bands used?	Understand	CACE804.06
Part - B (Long Answer Questions)			
1	What is the need for the study of multispectral, thermal and hyperspecteal remote sensing? Give its importance.	Remember	CACE804.05
2	Explain the working principle of Multispectral scanners in connection with remote sensing	Remember	CACE804.05
3	What is the difference between Across-track scanningAlong-track scanning? Explain in detail.	Understand	CACE804.05
4	What is Thematic Mapper? Explain its applications with suitable example.	Remember	CACE804.06
5	What is Thermal scanner? Explain its applications with suitable example	Understand	CACE804.06
6	Explain in detail about Principle involved in the thermal sensing in connection with remote sensing.	Remember	CACE804.05
7	What is Thermal imaging? Explain in detail with the help of a neat sketch.	Understand	CACE804.06
8	What is Hyperspectral Sensors? Explain in detail with the help of a neat sketch.	Understand	CACE804.06
9	Explain in detail about the Landsat Satellite Program in India.	Remember	CACE804.07
10	What is SPOT satellite program? Explain its importance and its limitations.	Understand	CACE804.07
11	What is IRS satellite program? Explain its importance and its limitations.	Understand	CACE804.07
12	What do you mean by Very high resolution systems? Discuss about IKONOS.	Remember	CACE804.06
13	Discuss in detail about QuickBird a commercial high resolution remote sensing system?	Understand	CACE804.06
14	What do you mean by Geo-stationary satellites? Give explanation with recent advancements	Understand	CACE804.06
15	What is CARTOSAT AND RADARSAT? Explain about them briefly?	Remember	CACE804.06
16	Analyze the elements or processes involved in earth remote sensing with a neat diagram.	Understand	CACE804.06
17	Illustrate the Electromagnetic spectrum, with emphasis on optical visible spectral bands.	Understand	CACE804.06
18	Discuss the difference between active and passive remote sensing and explain about the energy sources used.	Understand	CACE804.05
19	Scrutinize various applications and advantages of aerial and satellite remote sensing.	Understand	CACE804.05
20	Explain about two energy sources available for earth passive remote	Remember	CACE804.05
21	Explain about sensing and elucidate with their spectral characteristic curves.	Understand	CACE804.05
22	Describe spectral properties of water bodies and how these can be used to differentiate pure and sediment water.	Understand	CACE804.05
23	What resolution? Illustrate different types of resolution.	Understand	CACE804.07
24	Which part of the EMR spectrum is used for radar remote sensing?	Remember	CACE804.05
25	Which part of the EMR spectrum is used for optical remote sensing?	Understand	CACE804.05
Part - C (Critical Thinking Questions)			
1	What are atmospheric windows and write about the atmospheric windows in optical Remote Sensing.	Understand	CACE804.05
2	What are the visual image interpretation elements in Remote Sensing?	Understand	CACE804.05
3	Describe the interaction process of Electromagnetic radiation with the Earth's surface features.	Remember	CACE804.06

4	Discuss how the sensors are classified or categorized in Remote Sensing.	Understand	CACE804.05
5	Explain the terms Spectral Reflectance, Specular reflection, Diffuse reflection.	Understand	CACE804.05
6	Name at least three platforms used for Earth Remote Sensing.	Understand	CACE804.05
7	Is RADAR Imaging Satellite (RISAT) of India is a platform for Active Senor or Passive sensor? Why?	Remember	CACE804.07
8	Define the basic concepts and foundation of Remote Sensing.	Understand	CACE804.05
9	Define remote Sensing and components of Remote Sensing.	Remember	CACE804.05
10	What is Active remote sensing? Explain with an example.	Remember	CACE804.05
UNIT 3			
Part – A (Short Answer Questions)			
1	What are Sensor driven errors? In connection with remote sensing.	Understand	CACE804.05
2	What are Systematic Errorsin connection with remote sensing?	Remember	CACE804.05
3	What areNon- Systematic Errorsin connection with remote sensing?	Remember	CACE804.05
4	Give/Draw Schematic representation of the systematic and non-systematic distortions	Remember	CACE804.06
5	Define the terms Scan skew and Platform velocity	Understand	CACE804.05
6	Write a short note on Earth rotation and Mirror scan velocity	Remember	CACE804.06
7	Give a brief note on Aspect ratio	Remember	CACE804.06
8	What is GCP (Ground Control Point)? What is its importance	Remember	CACE804.07
9	List the Properties of GCP (Ground Control Point)	Remember	CACE804.07
10	Draw the neat sketch of process involved in Insufficient distribution of GCP (Ground Control Point)	Remember	CACE804.07
11	Draw the neat sketch of process involved in Well distributed GCP (Ground Control Point)	Remember	CACE804.07
12	Draw the neat sketch of process involved in Poor distribution of GCP (Ground Control Point)	Remember	CACE804.07
13	What is Geometric rectification? in connection with remote sensing.	Remember	CACE804.05
14	What is Co-Registration in connection with remote sensing?	Understand	CACE804.05
15	Define Image Resampling in connection with remote sensing.	Understand	CACE804.05
16	Define vertical Datum's.	Remember	CACE804.08
17	Draw and explain plane rectangular coordinates?	Remember	CACE804.08
18	What is plane polar rectangular coordinate system?	Remember	CACE804.07
19	Define geographic coordinate system of the earth.	Remember	CACE804.07
20	Write the classification of map projection.	Remember	CACE804.06
21	What is planner and azimuthal projection?	Remember	CACE804.06
22	Define conical projection.	Remember	CACE804.06
23	What do you mean by projected coordinate systems?	Remember	CACE804.06
24	Define Geodatic Datum.	Understand	CACE804.06
25	What is Cylindrical projection?	Understand	CACE804.07
Part - B (Long Answer Questions)			
1	Discuss in detail the about the sensor driven errors in connection with remote sensing.	Remember	CACE804.05
2	Discuss in detail the about the atmospheric corrections in connection with remote sensing.	Remember	CACE804.05
3	Discuss in detail the about the solar illumination corrections in connection with remote sensing.	Remember	CACE804.05
4	Explain in detail about concepts of color in the importance of remote sensing.	Remember	CACE804.05
5	Explain in detail about color space in the importance of remote sensing.	Remember	CACE804.05

6	What is RGB model explain in detail with a neat sketch showing the components or parameters involved in it.	Remember	CACE804.07
7	What is CMYK and CMY color models? Explain with a neat sketch.	Remember	CACE804.07
8	Discuss in detail with the aid of figure about IHS color model.	Remember	CACE804.08
9	Explain in detail about the concept Color Transformations by taking an suitable example.	Remember	CACE804.08
10	What do you mean by Color Composites? Elaborate the same in detail.	Remember	CACE804.08
11	What is Optimum Index factor (OIF). And also explain the expression involved in it?	Remember	CACE804.07
12	What is Contrast stretching? Explain detail about different types Contrast stretching.	Remember	CACE804.07
13	Explain in detail about the Linear Contrast Stretching with a neat sketch.	Remember	CACE804.07
14	Explain in detail about the Non-linear Contrast Stretching with a neat sketch.	Remember	CACE804.07
15	What is the working principle involved in Piece-wise Linear Stretch	Understand	CACE804.07
16	List the major application areas of GIS	Remember	CACE804.06
17	Discuss GIS as a Tool for decision support system.	Remember	CACE804.06
18	What are common errors in GIS data bases? Write about the importance of Edge matching and rubber sheeting.	Remember	CACE804.06
19	Define the following term in the context of geographic coordinate system of Earth : latitude, longitude, parallel, meridian.	Remember	CACE804.06
20	Differentiate between the study of GIS as a special field of academic discipline and the study of GIS as a branch of Information Technology	Remember	CACE804.06
21	Define the following terms : a) Georeferencing b) mean sea level, geodetic datum, vertical datum	Understand	CACE804.06
22	Explain the meaning of map scale 1: 10,000. Is this a larger or smaller map scale than a map scale of 1: 1,000?	Understand	CACE804.06
23	Discuss what is meant by feature based GIS	Remember	CACE804.07
24	Describe vector data storage and attribute data storage in GIS	Remember	CACE804.07
25	Describe the characteristics and functions of DBMS.	Remember	CACE804.07
Part - C (Critical Thinking Questions)			
1	Briefly describe various elements involved in Geographic Information System.	Understand	CACE804.06
2	Describe the theoretical frame work and operations involved in Geographic Information System.	Remember	CACE804.06
3	Write the major application areas and uses of Geographic Information System in the management of earth resources.	Remember	CACE804.06
4	Name some data input devices? Discuss with a neat diagram.	Remember	CACE804.07
5	What are the technology component of GIS Explain with a neat diagram?	Understand	CACE804.08
6	List the keywords that you would like to include in typical definition of geographic information systems.	Remember	CACE804.08
7	Explain the difference between “data” and information related to knowledge and intelligence.	Remember	CACE804.07
8	Describe the characteristics of an information system.	Remember	CACE804.07
9	In what ways are GIS different from other classes of information systems?	Remember	CACE804.06
10	Explain the origin and meaning of “Geomatics’ and “Geographic Information science” How do they differ from Geographic Information Systems?	Understand	CACE804.06

UNIT 4			
Part – A (Short Answer Questions)			
1	What does it mean Filtering in Remote Sensing?	Remember	CACE804.08
2	What are different Filtering Techniques?	Remember	CACE804.08
3	What is Convolution filter?	Understand	CACE804.08
4	How Edge enhancement is important in Remote Sensing?	Remember	CACE804.08
5	What are Directional filters?	Remember	CACE804.08
6	What are Non-directional filters	Remember	CACE804.08
7	How directional filters are different from Non-directional filters	Understand	CACE804.08
8	Define Density slicing in Remote sensing.	Remember	CACE804.09
9	What is Thresholding is vital in Remote sensing?	Remember	CACE804.09
10	What are Intensity-Hue-Saturation (IHS) images?	Understand	CACE804.09
11	How transformation from RGB scheme into IHS scheme is done?	Remember	CACE804.09
12	How Image enhancement through IHS transformation is possible?	Remember	CACE804.09
14	List the Advantages of IHS transfer in image enhancement.	Understand	CACE804.09
15	What are Synergic images?	Remember	CACE804.09
16	Define types of vector data.	Remember	CACE804.10
17	Write any two uses of Geographic Information System?	Understand	CACE804.08
18	What is Non- Spatial data?	Remember	CACE804.09
19	What is spatial data?	Remember	CACE804.08
20	What is attribute data or non-spatial data?	Remember	CACE804.08
21	What feature in vector GIS?	Remember	CACE804.08
22	Define Polyline as feature with an example.	Understand	CACE804.09
23	Define polygon as feature with an example.	Remember	CACE804.10
24	Write the sources of vector data.	Understand	CACE804.10
25	List out the secondary data sources.	Remember	CACE804.10
Part - B (Long Answer Questions)			
1	Discuss in detail the about the Time composite images in connection with remote sensing.	Remember	CACE804.10
2	How the Selection of training samples is done. ON what factors it depent.	Remember	CACE804.10
3	What are the Statistical Feature Selection Measures? Explain in detail about the same.	Remember	CACE804.10
4	How Parallelepiped classifier works. Explain it working principle.	Understand	CACE804.10
5	What is Minimum distance to means classification algorithm explainthe different terms involved in it	Remember	CACE804.10
6	What is Maximum likelihood classifier to means classification algorithm explain the different terms involved in it	Remember	CACE804.10
7	What is Accuracy of Classification? Explain the importance in it	Understand	CACE804.09
8	Explain about Chain Method of Unsupervised Classificationin connection with remote sensing.		CACE804.08
9	What is Cluster? Explain the detail about the Merging of clusters	Understand	CACE804.08
10	Explain about Iterative Self Organizing Data Analysis Technique (ISODATA) and the process involved in it.	Remember	CACE804.09
11	What is K means algorithm. Explain steps involved in construction of K means algorithm.	Remember	CACE804.09
12	Explain briefly about Fuzzy Set Theory in detail.	Understand	CACE804.10
13	What is Membership Function in fuzzy classification	Remember	CACE804.10
14	Explain the different Fuzzy classification methods briefly with help of expressions.	Remember	CACE804.10
15	Explain the Supervised Approach briefly with help of expressions.	Understand	CACE804.08
16	Compare and contrast the raster and vector data model.	Understand	CACE804.09

17	What are the advantages of raster data model.	Understand	CACE804.09
18	Discuss what is the overall goal of data base management system.	Remember	CACE804.09
19	Describe layers in GIS. Draw with a neat diagram.	Remember	CACE804.08
20	Name three basic file structures used in GIS?	Understand	CACE804.08
21	What is the Difference between choropleth and Isopleth thematic maps?	Remember	CACE804.08
22	What purpose does the Grid or Cell serve in data representation?	Remember	CACE804.09
23	How a minimum mapping unit is different from the size of a raster cell?	Understand	CACE804.09
24	What are the input data sources for GIS that serve as primary data? List out the secondary data sources.	Remember	CACE804.09
25	What is shape file? What are the different types of features in vector data model.	Understand	CACE804.09
Part - C (Critical Thinking Questions)			
1	Explain Vector data storage and attribute data storage in GIS.	Remember	CACE804.08
2	Write about the method of obtaining vector data using scanners.	Understand	CACE804.08
3	Explain digitization process and write its advantages.	Remember	CACE804.09
4	What are common errors in GIS data bases? Write about the importance of Edge matching and rubber sheeting.	Remember	CACE804.08
5	Discuss what is mean by feature based GIS.	Understand	CACE804.08
6	Explain GIS data file management by referring to the three basic computer file structures.	Remember	CACE804.08
7	Describe various data storage methods used in GIS.	Remember	CACE804.08
8	Write an overview of the data manipulation using Hierarchical Raster Structures containing Quad tree data Structure and Pyramid data structures in GIS.	Understand	CACE804.10
9	Describe the Computational Analysis Methods(CAM) and Visual Analysis Methods (VAM) used in GIS.	Remember	CACE804.10
10	Explain Integrated analysis of the spatial and attribute data in GIS.	Understand	CACE804.10
UNIT V			
Part – A (Short Answer Questions)			
1	What does it mean Arithmetic Operations in Remote Sensing?	Understand	CACE804.11
2	What is Image Subtractionin Remote Sensing?	Remember	CACE804.11
3	What is Image Additionin Remote Sensing?	Remember	CACE804.12
4	How Image Ratio and Vegetation Indices are prepared?	Understand	CACE804.13
5	What is Image Multiplicationin Remote Sensing?	Remember	CACE804.13
6	What isTransformed Vegetation Index (TVI)	Remember	CACE804.11
7	How Perpendicular Vegetation index (PVI) are prepared.	Remember	CACE804.11
8	Define Density slicing in Remote sensing.	Understand	CACE804.13
9	What is Soil Adjusted Vegetation Index (SAVI) in Remote sensing?	Understand	CACE804.13
10	What is Tasseled Cap Transformation?	Remember	CACE804.12
11	How transformation from RGB scheme into IHS scheme is done?	Remember	CACE804.12
12	How Image enhancement through IHS transformation is possible?	Understand	CACE804.12
13	List the different applications of Remote Sensing.	Remember	CACE804.13
14	What are the merits and demerits of remote sensing	Remember	CACE804.13
15	Give brief note of application in terms of coastal engineering	Understand	CACE804.13
16	Name the methods used for conversion of data between raster and vector data forms.	Understand	CACE804.12
17	Name three basic file structures used in GIS?	Understand	CACE804.12
18	What is meant by Cleaning in data editing?	Remember	CACE804.12
19	Define classes in GIS?	Remember	CACE804.12
20	Name a few vector models and answer what they are?	Remember	CACE804.13
21	List out at least three popular GIS Raster data file formats.	Remember	CACE804.13

22	What is an Overlay operation in GIS?	Remember	CACE804.13
23	Explain Computational Analysis method.	Understand	CACE804.13
24	What is Visual Analysis Method?	Remember	CACE804.11
25	Give some examples and write about graphical output for data visualization.	Understand	CACE804.11
Part - B (Long Answer Questions)			
1	Explain in details about remote sensing applications in watershed management with suitable examples.	Remember	CACE804.10
2	Explain in details about remote sensing applications in rainfall-runoff modelling with suitable examples.	Remember	CACE804.11
3	Explain in details about remote sensing applications in irrigation management with suitable examples.	Understand	CACE804.10
4	Explain in details about remote sensing applications in flood mapping with suitable examples.	Remember	CACE804.11
5	Explain in details about remote sensing applications in drought assessment with suitable examples.	Understand	CACE804.11
6	Discuss in detail the role of remote sensing in environmental monitoring.	Remember	CACE804.12
7	What are the visual image interpretation elements in Remote Sensing?	Understand	CACE804.13
8	Is RADAR Imaging Satellite (RISAT) of India is a platform for Active Senor or Passive sensor? Why?	Remember	CACE804.12
9	Discuss the role and functions of remote sensing in Disaster Manager	Remember	CACE804.13
10	What are atmospheric windows and write about the atmospheric windows in optical Remote Sensing.	Remember	CACE804.11
11	Discuss in detail the role of remote sensing in estimatingSnow cover and water equivalent.	Understand	CACE804.11
12	Discuss in detail the role of remote sensing in Geo-thermal Energy field of engineering	Remember	CACE804.12
13	Discuss in detail the role of remote sensing in Urban and Regional Planning	Remember	CACE804.13
14	Explain in details about different Remote sensing satellites in India and write applications.	Understand	CACE804.12
15	Discuss in detail the role of remote sensing in Groundwater Studies and its importance in Water resource engineering	Remember	CACE804.11
16	Describe the data stream flow in GIS system with a block diagram.	Understand	CACE804.13
17	Critically examine what is meant by Layer based GIS with examples.	Remember	CACE804.13
18	What are Raster and Vector data forms. Compare Raster data and Vector data representations.	Remember	CACE804.12
19	Explain about data capture, data input, and data output in Geographic Information System.	Remember	CACE804.11
20	What are the advantages of vector model data model?	Remember	CACE804.12
21	Explain with a neat diagram how real world data is converted into Raster format.	Remember	CACE804.12
22	Define data. What are the input data sources for GIS that serve as primary data? List out the secondary data sources.	Remember	CACE804.13
23	What is overlay operation in GIS?	Understand	CACE804.13
24	Explain integrated analysis of spatial and attribute data.	Remember	CACE804.13
25	Explain GIS data file management by referring three basic computer file structures.	Understand	CACE804.13
Part - C (Critical Thinking Questions)			
1	Explain how buffering is carried out in raster data.	Understand	CACE804.11
2	Explain Data capture, data input and data output in GIS	Remember	CACE804.10
3	Describe data stream flow in GIS system with a block diagram.	Remember	CACE804.11

4	Critically examine what is meant by layer absed GIS with examples.	Remember	CACE804.12
5	Explain about data capture, data input, and data output in Geographic Information System.	Remember	CACE804.11
6	Explain digitization process and write its advantages.	Understand	CACE804.12
7	Digitizer is a device to convert graphic data into digital data. What is digitizing operation in GIS?	Remember	CACE804.12
8	Write about the method of obtaining vector data using scanners.	Remember	CACE804.13
9	Write the major applications areas and uses of Geographic Information System in the management of earth resources.	Understand	CACE804.13
10	What purpose does the Grid or cell serve in data representation?	Remember	CACE804.13

Prepared by:
Mr. Srinivas Angadi, Assistant Professor in Civil Engineering.

HOD, CE