Gandhi Institute of Engineering and Technology University, Odisha, Gunupur
(GIET University)

B. Tech (Fifth Semester - Regular) Examinations, November – 2024
22BCVOE65001 – Remote Sensing and GIS
(Civil Engineering)

Time: 3 hrs   Maximum: 70 Marks

Answer ALL questions
(The figures in the right hand margin indicate marks)

PART – A   **(2 x 5 = 10 Marks)**

Q.1. Answer *ALL* questions

		CO #	Blooms Level
a.	List the applications of remote sensing in civil engineering.	CO1	K1
b.	Explain the process of remote sensing data acquisition.	CO1	K2
c.	Define georeferencing in GIS.	CO2	K1
d.	Define map projection.	CO3	K1
e.	Define the term 'attribute data' in GIS.	CO4	K1

PART – B   **(15 x 4 = 60 Marks)**

Answer *All* the questions

		Marks	CO #	Blooms Level
2. a.	Explore the ethical and social implications of remote sensing, including privacy concerns, data security, and the responsible use of remote sensing technologies in various sectors.	8	CO1	K2
b.	Discuss how remote sensing techniques contribute to sustainable agriculture practices.	7	CO1	K2
	(OR)			
c.	Explain the various types of remote sensing platforms, including satellites, drones, and aircraft. Describe their advantages, limitations, and applications.	8	CO1	K2
d.	Discuss the electromagnetic spectrum and its relevance to remote sensing.	7	CO1	K2
3.a.	Write the different steps to follow in the Digitization Process.	8	CO2	K2
b.	Explain the process of spatial data capture and maintenance in GIS.	7	CO2	K2
	(OR)			
c.	Discuss GIS analysis functions and operations.	10	CO2	K2
d.	Explain the Raster Data Structure in details with suitable sketches.	5	CO2	K2
4.a.	Examine the role of GIS in environmental monitoring and natural resource management.	8	CO3	K2
b.	Explain the importance of map scale, legend, symbology, and metadata in map design.	7	CO3	K2
	(OR)			
c.	Describe the various features commonly found in GIS software packages	8	CO3	K2
d.	Explain the map overlay analysis in details.	7	CO3	K2
5.a.	What is Data Quality in GIS? Discuss Data Quality in term of Resolution and Accuracy.	8	CO4	K2
b.	Discuss the differences between vector and raster GIS formats for storing data in GIS. For what types of data is the raster format is best suited?	7	CO4	K2

<center>(OR)</center>

c.	Describe the types of vector overlays with neat sketches	8	CO4	K2
d.	Explain the processes involved in collecting, storing, and updating spatial data	7	CO4	K2

<center>--- End of Paper ---</center>