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GIET UNIVERSITY, GUNUPUR – 765022

B. Tech (Fifth Semester – Regular) Examinations, December – 2022

BOECV5050 – 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: (Multiple Choice Questions)

(1 x 10 = 10 Marks)

- | <u>Q.1. Answer ALL questions</u> | [CO#] | [PO#] |
|---|-------|-------|
| a. The geographic element of vector data structures are | CO1 | PO1 |
| (i) point | | |
| (ii) arc | | |
| (iii) Area | | |
| (iv) All of these | | |
| b. Small area in vector data represented by | CO1 | PO2 |
| (i) Point data | | |
| (ii) Areal data | | |
| (iii) Line data | | |
| (iv) Continuous data | | |
| c. Line in polygon is a method of _____ overlay | CO1 | PO2 |
| (i) Vector | | |
| (ii) Raster | | |
| (iii) Both | | |
| (iv) None | | |
| d. In raster overlay a point is represented by | CO2 | PO1 |
| (i) String of cells | | |
| (ii) Group of cells | | |
| (iii) Single cell | | |
| (iv) All of these | | |
| e. Micro-station geographies is related to | CO2 | PO1 |
| (i) GIS | | |
| (ii) RS | | |
| (iii) Both | | |
| (iv) None | | |
| f. Which is not a GIS software | CO2 | PO1 |
| (i) Geometica | | |
| (ii) Arc GIS | | |
| (iii) Adobe | | |
| (iv) ILWIS | | |
| g. How many types of RS is in use | CO3 | PO2 |
| (i) 1 | | |
| (ii) 2 | | |
| (iii) 3 | | |
| (iv) 4 | | |
| h. RS data is collected | CO4 | PO2 |
| (i) Without touching the object | | |
| (ii) Without seeing the object | | |
| (iii) By seeing the object | | |
| (iv) By touching the object | | |
| i. What is the source of energy for active sensors | CO4 | PO2 |
| (i) sun | | |
| (ii) flash light | | |
| (iii) Own Electromagnetic waves | | |
| (iv) All of these | | |
| j. A river in vector data is represented by | CO4 | PO1 |
| (i) Point | | |
| (ii) Line | | |
| (iii) Polygon | | |
| (iv) None | | |

PART – B: (Short Answer Questions)**(2 x 10 = 20 Marks)**Q.2. Answer ALL questions

	[CO#]	[PO#]
a. Name some RS satellites	CO1	PO1
b. What are the types of RS	CO2	PO1
c. What is aerial RS	CO1	PO2
d. What is passive system of collecting data	CO2	PO1
e. What are the components of GIS	CO3	PO2
f. What are the data structures in GIS	CO3	PO2
g. What is vector overlay analysis	CO3	PO2
h. Name any 2 capabilities of GIS	CO4	PO1
i. What are the types in geometica software	CO4	PO1
j. What is raster data	CO4	PO1

PART – C: (Long Answer Questions)**(10 x 4 = 40 Marks)**Answer ALL questions

	Marks	[CO#]	[PO#]
3. a. What is meant by ideal remote sensing	5	CO1	PO1
b. Explain the working procedure of RS	5	CO2	PO1
(or)			
c. What are the applications of RS in civil engg	10	CO2	PO1
4. a. Discuss briefly about vector map overlay with example	5	CO3	PO2
b. Explain the sources of errors in GIS	5	CO3	PO2
(or)			
c. Explain data quality and its gauging points	10	CO4	PO1
5. a. Explain major applications area of GIS	5	CO4	PO1
b. What is meant by polygon data	5	CO4	PO1
(or)			
c. Explain vector data and raster data with neat sketches	10	CO2	PO1
6. a. Write short notes on	10	CO1	PO2
i. Line and string data			
ii. Pixels			
iii. Grid cells			
iv. Point data			
(or)			
b. Discuss how closely GIS is related to RS	5	CO3	PO2
c. Explain the components of GIS	5	CO3	PO2

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