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B.Tech DEGREE EXAMINATION, NOVEMBER 2023

Fifth Semester

18CEE309T - GEOGRAPHIC INFORMATION SYSTEM

(For the candidates admitted during the academic year (2020-2021 & 2021-20222))

Note:

i. **Part - A** should be answered in OMR sheet within first 40 minutes and OMR sheet should be handed over to hall invigilator at the end of 40th minute.

ii. **Part - B** and **Part - C** should be answered in answer booklet.

Time: 3 Hours **Max. Marks: 100**

PART - A (20 × 1 = 20 Marks)

Answer **all** Questions

		Marks	BL	CO
1.	GIS stands for_____ (A) Geographic Information System (B) Geographic Internal System (C) Global Information System (D) Geological Information System	1	1	1
2.	GIS represents a location in ____ (A) 2 (B) 3 (C) 4 (D) 5	1	2	1
3.	Which of the following are the digital data creation methods used for GIS data creation? (A) Digitization (B) Orho photos (C) Orthorectification (D) key process	1	2	1
4.	Head up digitizing traces geographical data _____ way on top of aerial imagery. (A) Directly (B) Indirectly (C) Separately (D) Independently	1	3	1
5.	A puck has small size window with _____ hairs. (A) straight (B) cross (C) vertical (D) horizontal	1	3	2
6.	Which of the following is a GIS operation? (A) Geo data (B) Geo processing (C) Global processing (D) Geo entry	1	2	2
7.	The input to geoprocessing is _____. (A) Datasheet (B) Alphanumeric (C) Numeric (D) Alphabets	1	3	2
8.	A rational database contains _____. (A) Numbers (B) Texts (C) Images (D) Both a and b	1	4	2
9.	GIS accuracy depends on _____. (A) the encoded process (B) source data (C) Both a and b (D) location	1	4	3
10.	_____ determines the fidelity of the represented colors in raster graphics. (A) Color depth (B) Color brightness (C) Color dimensions (D) Color width	1	4	3
11.	Which of the following are the applications of web mapping? (A) Google maps (B) Bing maps (C) Open street Maps (D) All the above	1	4	3

12.	Which of the following are traditional methods to store GIS data? (A) Vector graphics (B) Raster images (C) Both a and b (D) topology	1	5	3
13.	Which of the following formats can be used for GIS output? (A) DXF (B) PDF (C) GIF (D) HTML	1	4	4
14.	What are the three type groups of vector data? (A) Points, lines, and imagery. (B) Points, lines, and polygons. (C) Points, polygons, and imagery. (D) Points, lines, polygons, and imagery	1	3	4
15.	Which tables give data unique characteristics? (A) Data. (B) Raster. (C) Excel (D) Attribute.	1	4	4
16.	What are the three types of models we can create when generating a schema? (A) Physical, logical, or rational. (B) Logical, rational, or metadata. (C) Physical, logical, or metadata. (D) Physical, rational, or metadata.	1	4	4
17.	What kind of analysis creates a layer comprised of intersected or united data? (A) Overlay. (B) Network. (C) Attribute. (D) Proximity.	1	1	5
18.	Which analysis is also referred as "least cost routing?" (A) Spatial. (B) Integer. (C) Network. (D) Attribute.	1	2	5
19.	To represent the change in moisture level of soil, which modelling format is useful ? (A) Raster (B) Vector (C) Both a and b (D) Topology	1	3	5
20.	TIN stands for (A) Traffic Internet Network (B) Triangulated Irregular Network (C) Temporal Interest Network (D) Temperature Interface Node	1	3	5

PART - B (5 × 4 = 20 Marks)

Answer **any 5** Questions

		Marks	BL	CO
21.	Explain spatial analysis with an example.	4	3	1
22.	What are three basic techniques used to create a projection. Explain them.	4	4	2
23.	Write short notes on Raster data and Vector data	4	3	3
24.	Explain Buffer analysis.	4	2	4
25.	How to generate DEM?	4	5	5
26.	Explain the application of buffer in environmental studies.	4	4	5
27.	What is the role of GIS in Smart City Mapping?	4	3	5

PART - C (5 × 12 = 60 Marks)

Answer **all** Questions

		Marks	BL	CO
28.	(a) Explain in detail the various components of GIS.	12	2	1
	(OR)			
	(b) Explain briefly various types of map projection.			
29.	(a) Compare the merits and demerits of raster and vector data model in GIS.	12	3	2
	(OR)			
	(b) Explain how to transform GIS data into data build environment.			

30.	(a) How to do geospatial data analysis? Explain.	12	4	3
	(OR)			
	(b) Explain overlay analysis.			
31.	(a) Explain the importance of DEM in groundwater studies.	12	4	4
	(OR)			
	(b) Explain network analysis and its application.			
32.	(a) Enumerate GIS application in land use and land cover mapping.	12	5	5
	(OR)			
	(b) Explain GIS application in disaster management studies.			

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