**SIKKIM MANIPAL INSTITUTE OF TECHNOLOGY**

**Department of Information Technology**

**SESSION EXAM-I**

**OPEN ELECTIVE**

**GIS IT1734**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1 | GIS stands for | | | |
|  | Geologic Information System | Geographic Information System | Geographical Information System | Global Information System |
| 2 | GIS deals with | | | |
|  | Complex data | Binary data | Spatial data | Imaginary data |
| 3 | Which of the following is a spatial data | | | |
|  | Location (latitude, longitude) of a oil well | Minimum temperature in Delhi on 01/01/2018 | Depth of a coal mine in Jharia | Elevation of the Mount Everest |
| 4 | GIS is \_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_technology | | | |
|  | a) Spatial and Manual | b) Digital and Spatial | c) Spatial and Analogue | d) Digital and Analogue |
| 5 | Name the components of GIS. | | | |
|  | a) Computer System, Software, Spatial Data, People and Data Management & Procedure | b) Software, Spatial Data, Data Management & Procedure, Theory, Printers | c) Software, Equations, Maps, Theory, People | d) Computer System, Software, Maps, Spatial Data, Theory |
| 6 | Three basic kinds of spatial entities are\_\_\_\_\_\_\_\_\_\_\_\_. | | | |
|  | a) Point, Raster, Attributes | b) Image, Raster, Polygon | c) Polyline, Polygon, Raster | d) Point, Line, Polygon |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 7 | Mention the types of Map Overlay. | | | |
|  | a) Raster, Attributes | b) Image, Vector | c) Raster, Vector | d) Point, Polygon |
| 8 | Where is metrological station **'1'** located in the resultant map? | | | |
|  | a) Only in Forest Region | b) Only in Non-Forest Region | c) Both Forest & Non-Forest Region | d) Neither Forest Nor Non-Forest Region |
| 9 | On the resultant data layers ‘0’ is the value given to cells contain features of interest called\_\_\_\_\_\_ | | | |
|  | a) Forest not in resort | b) Neither forest nor resort | c) Forest in resort area | d) Resort, no forest |
| 10 | Find the area of the given polygon in units and Justify it. | | | |
|  | a) 487.5 sq. units | b) 478.5 sq. units | c) 468.5 sq. units | d) 438.5 sq. units |
| 11 | Derive the steps to compute the perimeter of the given polygon in units. | | | |
|  | a) 103 units | b)  107 units | c) 106 units | d) 108 units |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 12 | The two most commonly used terrain parameters are \_\_\_\_\_\_\_\_\_. | | | |
|  | a) Slope and gradient | b) Slope and aspect | c) Aspect and shadow | d) Aspect and gradient |
| 13 | Which of the following spatial interpolation techniques is an example of a local, exact, abrupt  and deterministic interpolator? | | | |
|  | a) TIN | b) Spline | c) Thiessen polygons | d) Spatial moving average |
| 14 | Spatial referencing is the process of which of the following? | | | |
|  | Combing attribute values with locational information | Referencing geo-relational tables | Computing the reference between items in databases | Establishing the topology of spatial objects |
| 15 | GIS is unique because: | | | |
|  | GIS handles graphics | GIS handles attributes | GIS handles special information | GIS handles spatial information |
| 16 | The TIN model represents a surface as a set of: | | | |
|  | Non-contiguous and non-overlapping triangles | Contiguous and overlapping triangles | Contiguous and non-overlapping triangles | Non-contiguous and overlapping triangles |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 17 | Which of the following is not an example of spatial data? | | | |
|  | Times of particular events | Polygons showing the area occupied by a particular land use or variable | Points showing location of discrete objects | Lines showing the route of linear objects |
| 18 | The advantage of Standard Query Language (SQL) in relation to GIS databases? | | | |
|  | It is special | It is good at handling geographical concepts | It uses a true-English style of questioning | It is simple and easy to understand |
| 19 | Which database model is most commonly used in GIS? | | | |
|  | Hierarchical | Network | Object-Oriented | Relational |
| 20 | Spatial resolution may best be defined as: | | | |
|  | The smallest feature that can be mapped or measured | The smallest unit or measurement into which data can be disaggregated | The accuracy and precision of the data | The overall quality of a dataset |
| 21 | What is a model? | | | |
|  | A model is a method for storing spatial data | A model is a suite of computer programs | A model is a simplified representation of reality | A model is a set of instructions to a GIS |
| 22 | Map projections are used to represent: | | | |
|  | 4D Earth in to 3D Map | 3D Earth in to 2D Map | 3D Earth in to 1D Map | 2D Earth in to 3D Map |
| 23 | The rate of change of elevation is called \_\_\_\_\_\_\_ | | | |
|  | Gradient | Aspect | Shadow | Slope |
| 24 | The maximum slope is called the \_\_\_\_\_\_\_\_ | | | |
|  | Gradient | Aspect | Shadow | Slope |
| 25 | The two most commonly used terrain parameters are \_\_\_\_\_\_\_ | | | |
|  | Slope and gradient | Aspect and gradient | Slope and aspect | Aspect and shadow |
| 26 | Map overlay operations are based on\_\_\_\_\_\_ | | | |
|  | Deductive | Boolean Logic | Inductive | All of the above |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 27 | Which of the following is related to GIS | | | |
|  | Geo space | Pythogorian space | Ramanujan space | Euclidean space |
| 28 | By 'spatial data' we mean data that has | | | |
|  | Complex values | Positional values | Decimal values | Graphic values |
| 29 | Mention any four earth observational satellites with its features | | | |
|  | IRNSS, IRS, CARTOSAT, INSAT, OCEANSAT, RISAT, RESOURCESAT, SARAL |  |  |  |
| 30 | Mention any four extension file format accepted by GIS system. | | | |
|  | .SHP, .DBF, .SHX, .GEOJSON .JSON, .GML, .KML .KMZ |  |  |  |
| 31 | Derive the steps to compute the value of 'a'. | | | |
|  | 8 cm | 4 cm | 5 cm | 6 cm |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 32 | Calculate the perimeter of the given polygon and derive its steps. | | | |
|  | 58.5 cm | 56.5 cm | 57.5 cm | 59.5 cm |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 33 | Find the area of the shape shown below    Hint:This shape is a trapezoid, apply the given formula and find. | | | |
|  | 262.8 ft2 | 20.3 ft2 | 11 ft2 | 18 ft2 |
| 34 | Find the Euclidean distance of the Line shown below and Justify it. | | | |
|  | 10 units | 13 units | 11 units | 12 units |