Q1. Name 4 types of data which are generally used as Raw Input to GIS

Ans: satellite image, scanned Image/toposheets,Field Sample Data,Aerial Photographs

Q2.What is best data model to capture continuous varying quantity like temperature, elevation etc in GIS?

Ans:Raster Data Model

Q3:What is TIN and DEM? What is basic difference between them?

Ans:TIN(Triangular Irregular Network) and DEM(Digital Elevation Model) are 3d data models to represent the earth surface in GIS. TIN is vector Data and DEM is Raster Data

Q4:What is geo-referencing in GIS? What is your statement if one say that you did not geo-reference your vector data properly?

Ans:It means to assign the coordinates (Lat, Lon) to every pixels of the image with respect to a particular CRS system (Datum) in GIS. Then my statement will be that i will check the raster data from which Vector-data was created as you can geo-reference a Raster Data but not Vector Data in GIS.

Q5:Which datum and PCS system you will use for doing any GIS analysis for Sikkim State?

Ans:WGS 84/UTM 45N

Q6:How you will insert scale bar in GIS Map while exporting it into printable format in QGIS 3.12?

Ans:Export the GIS map on Canvas Area to new print layout (Project ->New Print Layout),

New window (Map composer) will open,

Add the Map and using Leftside toolbar, clickthe tool of "**add scale bar**",

Then drag a small box on the map where you want to place the scale bar,

After that you will adjust its item properties using right side panel accordingly.

Q7:Name the plugins and their application you have used in this training program

Ans: TauDEM -> Watershed Delineation and Stream Network Extraction

QuickMapServices-> Adding Web layer as Basemap (google satellite map, Bing Map etc)

QuickOSM- To download Vector Data from Web like (railway network, road network etc)

Q8: State the flowpath for watershed delineation in GIS

Ans: Create Depression less DEM->Flow Direction Grid->Flow Accumulation Grid->define Outlet point->delineate Watershed for that outlet point

Q9:If you are not able to delineate the watershed for particular outlet point then what may be the possible cause of it?

Ans: All of Above

Q10:How you can import GPS coordinates into QGIS 3.12 please indicate with flow diagram

Ans: Using add delimited file data:

Create a text/CSV file with your points having latitude (x-coordinate) and longitude (y-coordinate) columns.Click Open Data Source Manager->Delimited Text. New Dialog Box will open. Specify the Path of your Text/CSVfile. Define file format and type of Delimited text, Numbers of Header lines in your file, type of geometry and link proper X(longitude) to X column and Y(latitude) to Y column. choose Coordinate reference System of your point data, Keep an eye on the sample data table below which will show, we are getting our desired result or not. After adding that data layer, we will get all the points with on the canvas area. Save your data as Shapefile by exporting the file.

Q11:Which statement/s is/are correct?

Ans:GIS MAP is dynamic map which can be modified as per requirement of user

Raster Data may be created using Vector data

Q12:For creating Pipe laying network layer for city, which type of vector layer you will chose?

Ans: line vector layer

Q13:What do you mean by Threshold in respect of stream network extraction?

Ans:Defining a threshold value in GIS in case of stream network extraction means that all streams (main and branches) will start from that pixel where its contributing pixels value in the flow accumulation Grid is greater than the defined value(Threshold Value). By increasing/decreasing the Threshold value we can control the size of the sub-catchments and stream network order.

Q14:For larger basin delineation, which DEM resolution you will prefer?

Ans: 90m DEM

Q15:Which relation key is used while extracting water bodies using QuickOSM plugin in QGIS 3.12?

Ans: natural

Q16:What do you mean by administrative boundaries level 3?

Ans:Administrative boundaries of the level of Taluks

Q17:Which type of classification method you will use in case of vector layer of sub-catchments in QGIS?

Ans: Category

Q18:How do you verify if your data is properly geo-referenced or not?

Ans:By overlay method using already geo-referenced image/map such as Google satellite map, Open street Map, etc (we can use QuickMapServices to add Basemap: Web-Quick map services-

Search QSM-Google satellite in to our QGIS project).

Q19:Which tool is used you create relief map from DEM in QGIS?

Ans:Hillshade in Raster Terrain Analysis

Q20:Which tool is used to see the information about any feature in any GIS layer in QGIS?

Ans Identify Feature Tool