

Qn. 26

What is the importance of preparing layers in GIS?  
Write an example.

With the help of GIS softwares, spatial data can be stored as different layers. When the features of the surface of the earth are made as layers, we can separate the data that we need to make tables and maps easily.

*Example:* Using QGIS, a GIS software, different data about India are made into separate layers. Different layers to show the states in India, natural resources, mountains, cotton cultivated regions and jute cultivated regions are made. Maps obtained as different layers in this manner can be used for different analyses.

Qn. 27

Explain the three possibilities of GIS.

The three possibilities of GIS are explained below.

### **Overlay analysis**

Overlay analysis is used for understanding the mutual relationship between and the changes

undergone by the various features on the earth's surface. For example, using maps showing the states of India and the cotton cultivated regions, we can find out the states where cotton is cultivated, using overlay analysis. This analysis also helps to find out the changes in the extent of crops and land use patterns.

### **Buffer analysis**

In buffer analysis, a circular region is created around a point or corridor like region around a linear feature. For example, if the width of an existing road is increased by 10 m, we can find out the number of houses to be acquired, using buffer analysis.

### **Network analysis**

Linear features such as roads, rivers and railway lines are subjected to network analysis. Using this, we can find the nearest road to reach a place, less congested roads, roads without toll and hospitals, hotels and petrol pumps along the road .