

## 6. Modern Tools of Surveying and Mapping.

1 Explain the Application of Remote sensing.

This are the main application of Remote Sensing

1 In agriculture, this is used in crop statistic, management system of analysis.

2 In Forestry, this is used in measure Forest area and ~~types~~ a types of land.

3 It is also used in impact analysis and wetlands.

4 It is also used in mapping development and planning.

5 Remote sensing data can be used for taking sound decisions

- 6 It is also used in land and water conservation and development.
- 7 Remote Sensing is used For road development, planning and route analysis.
- 8 It is also used in integrated spatial and attribute data.
- 9 It is also used in snow melt and groundwater targeting.
- 10 In Geology, it is used in mineral targeting and oil exploration.
- 11 In marine, it is used in potential fishing gene.
- 12 In environment, it is used in wetland, pollution and abatement.



2 State and explain the component of GIS and explain its application.

GIS Full form is Geographic Information System.

There are main Five component of GIS.

- 1) Hardware
- 2) Software
- 3) Analysis
- 4) Data
- 5) People

1 Hardware:

Hardware consists of the computer system which run GIS system.

Computer Hardware is used to obtain inputs, processing and output.

2 Software:

The GIS software provides the function and tools that are necessary to store

Some common GIS software are ArcGIS, Geomatica etc.

3 Analysis: A computer system for GIS consists of hardware and software.

Analysis designed to support the data capture and storage.

4 Data:

Data are named as geospatial Data in GIS.

The sources of spatial data are maps, photographs and other related Documents.

5 People:

There must be people to plan, implement and operate the well as to make decisions based on the output.

There is main process of GIS component



## - Application of GIS:

- 1 GIS is used in engineering mapping.
- 2 It is used in Tax mapping or Highway mapping.
- 3 It is also used in census mapping and well log data mapping.
- 4 GIS is used in urban and regional planning.
- 5 It is used in Land use planning and management.
- 6 It is also used in routing highway and pipelines.
- 7 GIS is used in natural resources management like forests, agriculture etc.
- 8 It is also used in automated photogrammetry.

3 Write short note on GPS.

GPS is a worldwide radio-navigation system formed from a 24 satellites and their ground stations.

GPS uses these man-made stars as reference points to calculate positions accurately.

GPS based positioning systems are become more and more popular.

GPS are generally used for navigation purpose and also application of surveying.

The GPS enables the user to locate the position in three dimensions.

GPS system is run with the help of satellites launched for this purpose.

These days GPS is finding its way into cars, boats, planes etc.

GPS will become almost as basic as the telephone.



-> Basic Principles :

Global Positioning System run by the US department of defence.

The system has a minimum of 24 satellites.

-> The Global Positioning system is comprised of three segment.

1 Space Segment

2 Operational control Segment

3 User equipment Segment

-> Application of GPS.

1 In determining a position, GPS is help in positioning.

2 GPS helps to navigate and indentify the shortest routes.

3 Using special GPS devices, you can monitor the movement of an object or a person.

4 GPS is also use for creating map for surveying.

5 GPS is easy access to emergency road side support.