1. **Remote sensing :**
   The method of collecting information about an object, place or phenomenon without actual physical contact.

2. **Sensors :**
   Devices used for data collection in remote sensing.Cameras and scanners are sensors.

3. **Based on the source of the energy, remote sensing can be classified into two :**
   • **Passive remote sensing** - Remote sensing done with the help of solar energy
   • **Active remote sensing** - Remote sensing done with the aid of artificial sources of energy.

4. **Platform :**
   The carrier on which sensors are fixed.

5. **Based on the platform, remote sensing can be classified into three :**
   Terrestrial photography, Aerial remote sensing & Satellite remote sensing.

6. **Terrestrial photography :**
   Capturing photographs of the earth's topography from the earth's surface.

7. **Aerial remote sensing :**
   The continuous process of capturing photographs of the earth's surface using cameras mounted on air crafts.

8. **Merit of Aerial remote sensing :**
   • Gather clear information about comparatively smaller areas.
   • information of any region can be gathered.
   • Continuous pictures of the areas along the path of the aircrafts.

9. Overlap in aerial photographs :

In each aerial photograph, nearly 60% of the places depicted in the adjacent photo is included. This is done for ensuring continuity & to obtain three dimensional vision with the help of stereoscopes.

10. Stereo pair :

Two adjacent Overlap photographs.

11. Stereoscope :

Instrument that provides three dimensional views from Overlap photographs.

12. Merit of Overlap :

- give a synoptic view of the area
- help in understanding the undulations of the terrain.

13. Limitations of Aerial remote sensing :

- Shaking of Aircraft
- Not for Large Area
- Cost for Refueling
- Open Space for Landing & Take off.

14. Satellite remote sensing :

The process of gathering information using the sensors mounted on satellites.

15. Spectral signature :

Amount of energy reflected by each object is its spectral signature.

16. Satellite imagery :

Objects Recognized by the Sensor are converted into Images with the help of Computers.

17. Spatial resolution :

Size of the smallest object on earth that can be recognized by the sensor is the spatial resolution of that sensor.

18. Classification of Artificial satellites :

Geostationary & Sun synchronous satellites.

Geostationary satellites	Sun synchronous satellites
About 36000 km. above Earth	About 900 km.
1/3 of Earth comes Under its View	Field of View is Less

Move with the Earth's Rotation. Stays on a Specific Place.	Move the Earth along the Poles
Continuous Data Collection on it	Repetitive Data Collection is Possible
Used for Telecommunication, Weather studies.	Used for Data Collection on Natural resources, Land use, Ground Water...
eg.INSAT	eg.IRS

19. Uses of remote sensing technology :

- Weather observations
- Ocean explorations
- Understanding land use
- Monitoring flood and drought
- Identifying forest fires
- Know the extent of crops &
- spread of pest attack
- Oil explorations
- Locate groundwater potential

20. Geographic Information System (GIS) :

Softwares are used for preparing maps with the help of data collected through remote sensing and other methods of survey.

21. Two kinds of data are necessary for data analysis in GIS :

Spatial data, Attributes

22. Spatial data :

Latitudinal & Longitudinal Positions of Objects on Earth.

23. Attributes :

Elements of Locations Eg. Platform, Depth, etc.

24. Advantages of Layers :

easily prepare maps or tables of our preference, compile data, conduct thematic studies.

25. Analytical capabilities of GIS :

Network analysis, buffer analysis and overlay analysis

26. Network analysis :

The linear features in the map such as road, railway, rivers, etc. are subjected to network analysis. The shortest route, routes without toll,etc.can be identified through network analysis.

27. Buffer analysis :

An analytical capability used for analyzing the activities around a point feature or at a definite distance along a linear feature.

28. Overlay analysis :

It is used to identify the interrelationship of various surface features on earth and the changes they have undergone over a period of time.

29. Uses of GIS :

- Compile Data
- Update the Data
- Thematic Studies
- Spatial Representation
- Visual Model Generation
- Prepare Maps, Tables & Graphs

30. Global Positioning System (GPS) :

GPS helps sensing the latitudinal and longitudinal location and elevation of objects on the earth's surface along with the corresponding time.

SALEEM MP
SIR SYRD HSS, TPBA
9947985969