

LECTURE 4 BRANCHES OF SURVEYING

1. Aerial Surveying

- Aerial surveys are undertaken by using photographs taken with special cameras mounted in an aircraft viewed in pairs. The photographs produce three-dimensional images of ground features from which maps or numerical data can be produced usually with the aid of stereo plotting machines and computers.



2. Hydrographic Surveying (Hydro-Survey)



- Hydro survey is undertaken to gather information in the marine environment such as mapping out the coast lines and sea bed in order to produce navigational charts.



- It is also used for off shore oil exploration and production, design, construction and maintenance of harbours, inland water routes, river and sea defence, pollution control and ocean studies.

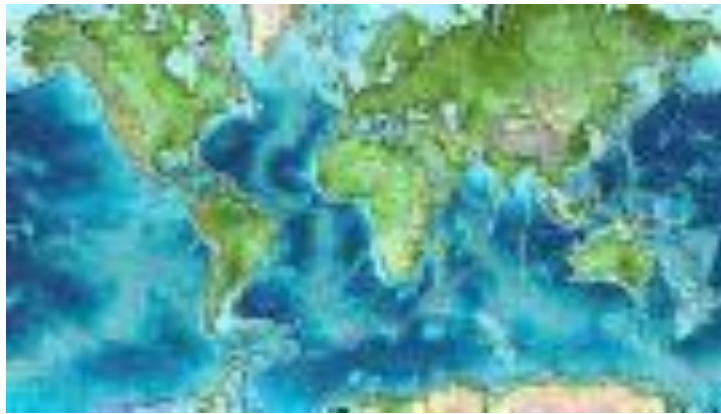


3. Geodetic Survey:

- In geodetic survey, large areas of the earth surface are involved usually on national basis where survey stations are precisely located large distances apart. Account is taken of the curvature of the earth, hence it involves advanced

mathematical theory and precise measurements are required to be made.

- Geodetic survey stations can be used to map out entire continent, measure the size and shape of the earth or in carrying out scientific studies such as determination of the Earth's magnetic field and direction of continental drifts.



4. Plane Surveying

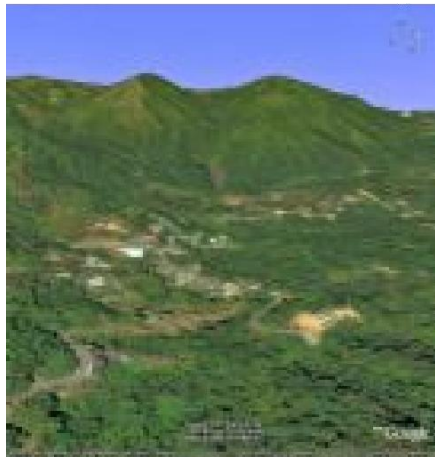
- In plane surveying relatively small areas are involved and the area under consideration is taken to be a horizontal plane. It is divided into three branches.
 - Cadastral surveying
 - Topographical surveying
 - Engineering surveying

5. Cadastral surveying

- These are surveys undertaken to define and record the boundary of properties, legislative area and even countries.
- It may be almost entirely topographical where features define boundaries with the topographical details appearing on ordinance survey maps.
- In the other hand, markers define boundaries, corner or line points and little account may be taken of the topographical features.

6. Topographical Survey

- These are surveys where the physical features on the earth are measured and maps/plans prepared to show their relative positions both horizontally and vertically.



- The relative positions and shape of natural and man –made features over an area are established usually for the purpose of producing a map of the area of for establishing geographical information system.

8. Engineering Survey

- These are surveys undertaken to provide special information for construction of Civil Engineering and building projects.
- The survey supply details for a particular engineering schemes and could include setting out of the work on the ground and dimensional control on such schemes.

