

## 1. Cartography-

Meaning, Development and Importance of Cartography

**Meaning of Cartography:** / or

**What is Cartography ?**

Cartography is the art and study of map making. It is not a simple process of map making. But it is concerned with data manipulation, data capture, image processing and visual display. It is the study and practice of making and using maps.

In ancient times, simple and traditional techniques were applied for map making. But in modern times, Geographical Information System (GIS) & Global Positioning System (GPS) is used for cartographic study. Here computer, soft-wares and satellite data, drone camera is used for the same purpose.

**Development of Cartography:** / (Historical Development)

**Ancient:**

The ancient cartography can be defined as the art, science and study of map making which typically uses a geographical area as a base. Here further relationships may be established using non- geographical elements, such as cultural, political, economic information etc.

The word Cartography is derived from the medieval Latin word “Carta” – means leaf of paper and “Graphy”- means the act of recording.

*Anaximander* was the first ancient Greek to draw a map of the known world. So he is regarded as the “*Father of Cartography*”. *Hecataeus* had produced another map fifty years later and he claimed it to be an improved one. Herodotus and Erastosthenes were the other well-known Greek map makers.

The first recordings of cartographic activity can be traced back to the earliest civilization. The first map on flattened clay tables was drawn by the Babylonians in 2300 BC. The ancient Greeks and Romans created maps from the time of Anaximander in the 6<sup>th</sup> century BC. In the 2<sup>nd</sup> century CE, Ptolemy wrote his treatise on cartography- “Geographia”. This contained Ptolemy’s world map. The Chinese people also study maps in 5<sup>th</sup> century BC.

Ancient Greeks created the maps for navigation. The Greek map makers showed Greece as the centre of the earth surrounded by an ocean.

Indian cartographic tradition covered the locations of the “polar star” and other constellations of use. These charts were used for navigation. The 8<sup>th</sup> century scholar “*Bhavabhuti*” conceived paintings which indicated cartographic regions.

In the middle age, the Arab geographers had done a lot for cartography. They used *Ptolemy’s* method. Caliph- *Al Mamun* put importance for the development of Arabian Cartography. *Al Balakhi, Al Idrishi, Ibn Batuta and Al Biruni* were the renowned geographers of that time.

European early medieval maps were mainly symbolic. In 13<sup>th</sup> century, the Majorcan Cartographic School was developed. This “School” was a collaboration of Jewish cartographers, navigators, cosmographers and navigational instrument makers.

Cartography developed further in Europe during the age of exploration. Cartographers, merchants and explorers created maps showing the new areas of the world they visited.

### Fundamental objectives of Traditional Cartography:

- Set the map's agenda and select traits of the object to be mapped.
- Traits may be physical (like roads, land masses) or abstract
- Represent the terrain of the mapped object on flat surface (map projection)
- Eliminate the objects that are not relevant to the maps purpose (generalization)
- Reduce the complexity of the characteristics

### Modern Cartography:

Modern cartography began with the advent of a variety of technological advancements. The invention of tools like the compass, telescope, the sextant, quadrant and printing press allowed map making easy and accurate. Development of map projections showed the world in a clear way.

*Abraham Ortelius* (1527- 1598) is often called as the “**Father of Modern Cartography**” because in 1570 he issued the “**First Modern Atlas**”- *Theatrum Orbis Terrarum*.

Technology has continuously changed to meet the new demands of map making. The invention of compass, magnetic storage devices allowed map making more advance. It also helped to store and manipulate data digitally.

In 20<sup>th</sup> century, aerial photography, satellite imagery and remote sensing provide efficient method of map making. The “Global Positioning System”- (GPS), “Geographic Information System”- (GIS), Google Earth, Various satellites, Drone and Advance Softwares make modern cartography more attractive.

