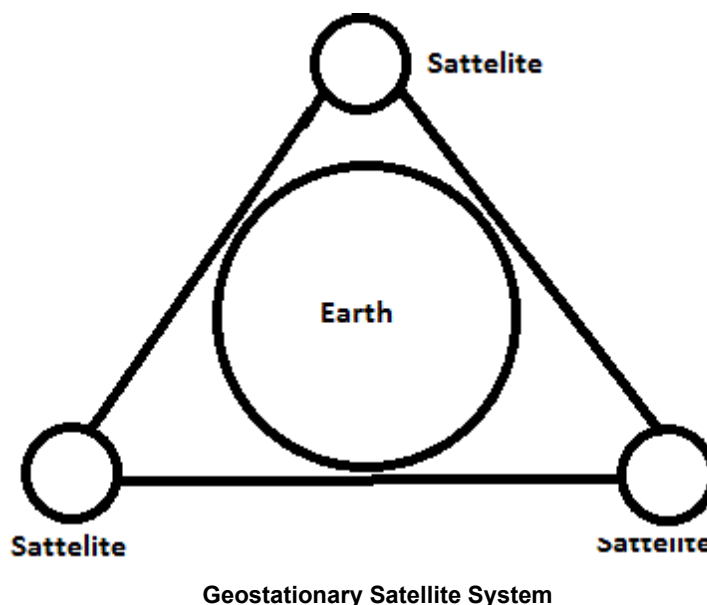


## Satellite Communication

### Introduction to Satellite Communication

Satellite is powerful long distance and point-to multipoint communication system. A communication satellite is an R.F (Radio Frequency) repeater. To overcome disadvantage of Line of sight communication which is only 45 - 55 km, the transmitting antenna is placed on the satellite and the satellite is placed in the orbit high above the earth. The function of satellite is to communicate between different earth stations around the earth, thus with the help of satellite, it is easy to communicate over thousands of km, a com-satellite is a combination of ROCKET to put the satellite in the orbit, micro wave electronic devices for the communication, solar cells are used to convert the solar energy into a power supply (ELECTRICAL ENERGY) for the electronic equipment.



The satellite placed in GEO- STATIONARY and placed at an altitude of 22300 miles or 35900 km above the ground level.

The satellite travels at the same speed at which the earth rotates around the sun. The rotation of satellite is synchronized with earth rotation as a result satellite appears to be stationary in the sky w.r.t the earth station is constant. There are 3 satellites are placed at angle  $120^\circ$  in GEO- STATIONARY orbit, they provide 100% coverage from one earth station to any where on the earth. this concept is shown below

