

**HOME WORK # 1**

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1. What is the main function of the TT&C ground station in a satellite communication system?
2. List the main elements of a DBS satellite communication system. What is the main function of a gateway in such a system?
3. What are the main disadvantages of a geostationary communication satellite?
4. What are the main advantages of having communication satellite in a Low Earth Orbit (LEO)?
5. List all types of orbits that are used for communication satellites.
6. Calculate the radius of a circular orbit for which the period is 2.5 hours.
7. Calculate the period of the space shuttle orbit which is a circular low earth orbit with an altitude of 250 km. The earth's radius is approximately 6378.14 km. Find also the linear velocity of the shuttle along its orbit.