CUBESAT PARTS AND FUNCTIONS

Let's explore the functions of each part in the labeled diagram of the CubeSat:

1. \*\*Antenna\*\*:

- The antenna is crucial for transmitting and receiving signals between the CubeSat and ground stations or other satellites. It enables communication, allowing telemetry data, images, and commands to be exchanged with Earth.

2. \*\*Communication Radio\*\*:

- The communication radio serves as the link between the CubeSat and ground stations. It facilitates data reception (downlink) and transmission (uplink). This system ensures seamless communication during the mission.

3. \*\*On-Board Computer (OBC)\*\*:

- The OBC acts as the satellite's brain. It coordinates tasks, manages data storage, interprets commands from Earth, monitors subsystems, and enables communication between different components.

4. \*\*Attitude Control Rods\*\*:

- These rods play a critical role in stabilizing and orienting the CubeSat in space. They help maintain the desired attitude and prevent tumbling.

5. \*\*Power Management\*\*:

- The power management system handles energy distribution within the CubeSat. It ensures that solar energy from the solar cells charges the battery, which then powers all subsystems.

6. \*\*Magnet\*\*:

- The magnet assists in passive magnetic attitude control. By interacting with Earth's magnetic field, it helps stabilize the satellite's orientation.

7. \*\*Battery\*\*:

- The battery stores electrical energy. It provides power when the CubeSat is not in direct sunlight (e.g., during eclipse periods).

8. \*\*Solar Cell\*\*:

- The solar cells convert sunlight into electrical power. They are essential for keeping the CubeSat operational by charging the battery and powering various systems.