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**(U) Orbit Mechanics**

Name \_\_\_\_\_

Date \_\_\_\_\_

**Multiple Choice**

Please indicate your response by circling the letter of the correct answer. Each question is worth one (1) point.

1. The benefit of a HEO orbit is \_\_\_\_\_.
  - a. Stationary over a specific point on earth
  - b. Long dwell time in apogee
  - c. Short dwell time in apogee
  - d. Shortest revisit time
  
2. The farthest distance that a satellite reaches from the primary body is known as:
  - a. Apogee
  - b. Inclination
  - c. Perigee
  - d. Perturbation
  
3. A \_\_\_\_\_ orbit is optimal for continuous surveillance of selected priority regions due to its continuous focused dwell (24 hours over fixed areas).
  
4. A satellite (in its most basic form) is made up of a \_\_\_\_\_ and a payload.
  
5. (U) What term describes the tilt of the orbit plane with respect to the equatorial plane?

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Use the following graphics to answer questions 4-9.



A



B



C

6. Which orbit is most effective for worldwide surveillance due to its ability to provide frequent revisits?
7. Which orbit is optimal for continuous surveillance of selected priority regions?
8. Which orbit is most responsive for focused surveillance and geolocation due to its polar dwell?
9. What is the name of orbit A? (spell out acronym)
10. What is the name of orbit B? (spell out acronym)
11. What is the name of orbit C? (spell out acronym)

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Answer Key

1. B
2. A
3. GEO
4. Bus
5. Inclination. 1pt
6. A 1pt
7. C 1pt
8. B 1pt
9. Low Earth Orbit (LEO) 2pts
10. Highly Elliptical Orbit (HEO) 2pts
11. Geosynchronous Orbit (GEO) 2pts

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