

Topic 6 - Above the Atmosphere and Under Control

1. The science of rocketry relies on a basic physics principle: For every action –
 - A. **Forces will remain constant**
 - B. **There is an equal and opposite reaction**
 - C. **Distance and speed will be decreased**
 - D. **There is a reason to overcome gravity**

2. The three basic parts of a rocket include all of the following, except ...
 - A. **fuel**
 - B. **payload**
 - C. **nosecone**
 - D. **structural elements**

3. Rockets have been around a long time and were originally used as...
 - A. **fireworks and weapons**
 - B. **ceremonial celebrations**
 - C. **modes of transportation**
 - D. **fuel for ceremonial fires**

4. **1926** - Robert Goddard launched the world's first...
 - A. **payload rocket**
 - B. **multiple-stage spacecraft**
 - C. **orbital achieving spacecraft**
 - D. **liquid-propellant rocket**

5. All fuels create exhaust which comes out the end of the rocket. The speed of the exhaust leaving the rocket is called the *exhaust velocity*, which determines the ...
 - A. **speed of the rocket**
 - B. **range of the rocket**
 - C. **direction of the rocket**
 - D. **altitude of the rocket**

6. A bomb that is powered by a rocket engine like the *V-2 rocket* is called a ...
 - A. **hydrogen bomber**
 - B. **atomic reaction**
 - C. **ballistic missile**
 - D. **scuba missile**

7. In the 1960's the Americans and the Russians needed to use computers to calculate and control their spacecraft in orbit. The first computers on the ground ...
 - A. **were laptops**
 - B. **used letters only**
 - C. **were not reliable**
 - D. **filled large rooms**

8. A method of acceleration which enables a spacecraft to achieve extra speed by using the gravity of a planet is called ...
 - A. **elliptical acceleration**
 - B. **gravitational assist**
 - C. **momentum acceleration**
 - D. **orbital velocity**

9. Satellites can be natural or artificial – the only natural satellites in this list ...
 - A. **Moon**
 - B. **Anik 1**
 - C. **LANDSAT**
 - D. **RADARSAT**

10. The GPS system involves the use of **24** satellites positioned in orbit, allowing for **3** to always be
 - A. **at the right angle to deflect the radio signals**
 - B. **visible at night to ensure visibility in the dark**
 - C. **above the horizon to be used at any one time**
 - D. **above or below the lowest object in the sky**