

## Study Guide for Astronomy Test #1 2019

- Aristotle knew the Earth was round because of the curved shadow it cast on the moon during a Lunar eclipse
- Retrograde motion is when a planet moves westward against the background of stars
- The Geocentric model of the universe states that Earth is the center of the Universe
- One astronomical unit (AU) is approximately 150,000,000 km
- Johannes Kepler is credited with the 3 laws of Planetary Motion
- Copernicus postulated the heliocentric model of the Solar System
- The force of gravity exerted on an object is weight
- All planets orbit the Sun in an elliptical orbit.
- The second law of planetary motion states a planet will cover the same distance in the same time
- Kepler discovered the true shape of the planets orbits.
- Night and Day are caused by Earth's rotation on its axis.
- Earth's seasons are caused by its tilt on its axis.
- The Moon's rotation is equal to its revolution
- During the Waxing phases more of the Moon seen each night during Waning less of the moon seen each night
- A solar eclipse occurs when the Moon's shadow cast onto the Earth
- Maria on the moon occurred when large impact basins filled in with basaltic lava creating large dark plains.
- The Moon has so many more craters than the Earth because the Moon does not have weathering and erosion.
- One of the facts that support the Giant impact theory is the lack of a large iron core for the Moon.
- High crater activity on the surface of the moon is associated with an old surface
- The 4 gas giant planets all have ring systems. The inner planets do not have these same features.
- One of the main differences between Jovian and Terrestrial planets is that rocky planets contain silicates while gas planets do not.
- The planet Mercury and Earth's moon have very similar surfaces because they do not have processes (weathering, erosion, volcanic activity) that resurface them.
- Radar mapping of Venus's surface shows plains, highlands and many volcanoes

- Mars has many features on the surface that indicate running water such as river, lakes, gullies, and streamline channels
- The great Dark spot is found on Neptune is it is feature similar to the great red spot on Jupiter
- Uranus is unique among the planets because its axis of rotation is nearly parallel with its orbital plain
- A comet's tail always faces away from the SUN as it enters the inner solar system
- Electromagnetic radiation consists of Radio waves, Microwaves, Infrared, Visible Light, Ultraviolet, X-rays and Gamma Rays
- In the visible light portion of the EMS the longest wavelength belongs to red and violet has the shortest wavelength
- Refracting telescopes uses lenses to bend light to a focus. A reflective telescope uses mirrors to focus light.
- Chromatic aberration causes light to become weaker as it travels through Earth's atmosphere
- The advantage of space-based telescopes is that they can collect light that does not have to travel through earth's atmosphere, which causes light to scatter
- Project Mercury was the first stage in the mission to send a man to the moon
- When the Hubble space telescope first launched it had a problem because its primary mirror was shaped incorrectly causing blurred images.
- In 1957 the first artificial satellite was launched by the Soviet Union it was named Sputnik 1
- In 1969 aboard Apollo 11 Neal Armstrong became the first Human to walk on the Moon
- In 1961 The first human to travel to space and return was from the Soviet Union and his name was Yuri Gagarin

## Diagrams

The phases of the moon

The seasons

The arrangement of the solar system to include the Planets, Pluto, Comets and The asteroid belt