**Out of This World Sun & Earth & Moon Research Assignment - Value 50 - September 30, 2019**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DUE DATE: October 2, 2019**

**Sun and Earth (12 pts)**

1. Describe the following two theories of how the universe was formed/evolved. **Value 6**
2. Big Bang Theory
3. Oscillating Theory
4. During which two seasons is the day the same length as the night? **Value 2**

**ANS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. If the Earth’s axis was not tilted (to 23.5 degrees), would the days and seasons on Earth be different? Explain why or why not. **Value 2**

**ANS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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1. If the Earth’s axis were tilted more than 23.5 degrees, would the days and seasons on Earth be different? Explain **Value 2**

**ANS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**Moon & Moon Phases (19 pts)**

1. The moon is a large sphere of: (1 pt.)
2. Lava
3. Rock
4. Gas
5. What does the moon not have? (1 pt.)
6. Rain, craters, water
7. Craters, air, life
8. Air, water, life
9. True or False: There is no wind or rain on the moon therefore its surface changes very little. (1 pt.)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. How many Apollo missions went to the Moon between 1969 and 1972? (1 pt.) \_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What is the name of the dark regions on the Moon called? (1 pt.) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Indicate the name of the pale areas that the Moon is covered with. (1 pt.) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. What is the size of the largest crater on the Moon? (1 pt.) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. What is the size of the largest crater on the Earth (width/depth)? (1 pt.) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. How many days does it take the moon to make one full revolution or circle around Earth? (1 pt.) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. Why do we see the Moon? (2 pts.)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. Identify each of the following phases of the moon below using the following terms: **Value 8**

***Waning Gibbous First Quarter Waxing Gibbous Full Moon Waning Crescent***

***New Moon Waxing Crescent Third Quarter***



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*Name: Name: Name:*

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*Name: Name: Name:*

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**Name: Name:**

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**The Sun (17 pts)**

1. **The Sun -** Find a brief description for each of the following terms: **Value 8**
2. Photosphere
3. Core
4. Convection zone
5. Radiative zone
6. Prominence
7. Chromosphere
8. Corona
9. Sun spots
10. ***Sun Facts –Indicate whether the following statement are True or False. Value 7***

***RESEARCH THE ANSWER IF YOU ARE NOT SURE***

1. \_\_\_\_\_\_\_\_\_\_\_\_\_ The Sun accounts for 99.86% of the mass of the solar system.
2. \_\_\_\_\_\_\_\_\_\_\_\_\_ Over one million Earth’s could fit inside the Sun.
3. \_\_\_\_\_\_\_\_\_\_\_\_\_ The outer surface of the sun is shiny but the interior is in total darkness.
4. \_\_\_\_\_\_\_\_\_\_\_\_\_ The energy created by the Sun’s core is nuclear fusion.
5. \_\_\_\_\_\_\_\_\_\_\_\_\_ The name of the visible layer of the sun is call the photosphere.
6. \_\_\_\_\_\_\_\_\_\_\_\_\_ Different parts of the sun rotate at different speeds. The poles of the sun takes longer to rotate than the equator.
7. \_\_\_\_\_\_\_\_\_\_\_\_\_ The sun is 149.6 million miles from Earth (on average).
8. How long does it take sunlight to travel to Earth? **Value 2**
9. Indicate two valued reasons why scientists should continue to explore space. Value 2

**TOTAL VALUE 50**