Grade 8 MCAS REVIEW QUIZ

Standards 8, 10, 11 & 12 – The Earth in the Solar System

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. Which of the following is the cause of the change of seasons?

a.	the distance of a place from the Equator
b.	prevailing winds blowing across land or water
c.	the tilt of the Earth's axis
d.	the rotation of the Earth

____ 2. How would an asteroid most likely change the Earth's climate?

a.	Debris from an asteroid hitting Earth could block sunlight.
b.	The asteroid would block the sun during its orbit, chilling the Earth.
c.	The asteroid would change the Earth's orbit, causing an ice age.
d.	If the asteroid fell in the ocean, it would make the sea level rise.

____ 3. Why does the equator experience about the same temperatures year-round?

a.	It tilts toward the sun and gets much more direct solar energy.
b.	It has no prevailing winds.
c.	It has no mountains to affect its climate.
d.	The sun's rays strike the equator at about the same angle all year.

____ 4. About how many Earth days does it take the Moon to travel around Earth?

a.	About a day	c.	About a month
b.	About a week	d.	About a year

____ 5. Each planet moves around in the sun in

a.	a path the shape of a circle.	c.	a path the shape of a spiral.
b.	a path the shape of an ellipse.	d.	similar-sized orbits.

____ 6. What two factors affect the gravitational attraction between two objects

a.	surface area and mass	c.	volume and mass
b.	distance and circumference	d.	distance and mass

____ 7. The moon orbits Earth at a speed of approximately 1 km per second. The moon is kept in orbit by which of the following?

a.	gravity	c.	magnetism
b.	lunar phases	d.	ocean tides

____ 8. Which of the following planets is **always** closer to the sun than it is to Earth?

a.	Jupiter	c.	Saturn

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b.	Mercury	d.	Uranus

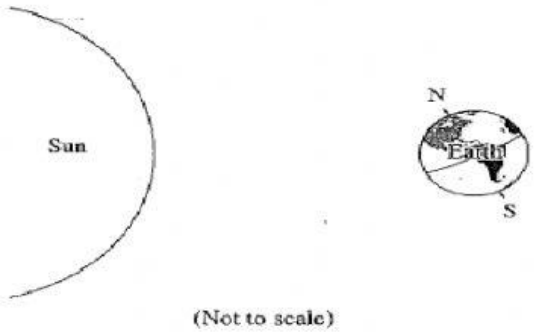
____ 9. Which of the following statements **best** describes how the four planets closest to the Sun are different from the next four planets in our solar system?

a.	The four closest planets are more dense.	c.	The four closest planets have greater diameters.
b.	The four closest planets have more moons.	d.	The four closest planets take longer to complete one orbit.

____ 10. Which of the following is a cause of the ocean levels periodically rising and then falling?

a.	The slight tilt of the moon	c.	The convection within the Earth's mantle
b.	The force of the gravity from the Moon.	d.	The revolution of Earth around the Sun.

____ 11. The illustration below shows Earth and the Sun



What season does the Southern Hemisphere experience when Earth and the Sun are in the positions shown?

a. fall
b. spring
c. summer
d. winter

____ 12. Which of the following statements **best** explains why it is warmer at the equator than at the North Pole?

a. The equator has a larger area than the North Pole.
b. The equator is closer to the Sun than the North Pole.
c. The equator receives more direct sunlight than the North Pole.
d. The equator has more hours of daylight per year than the North Pole.

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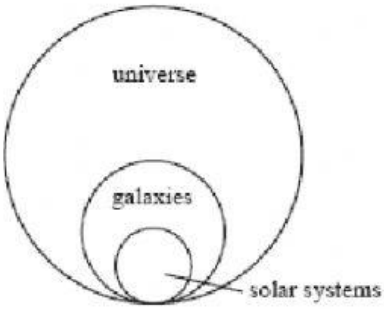
____ 13. Which of the following diagrams **best** represents the relationship between galaxies, the universe and solar systems?

A.



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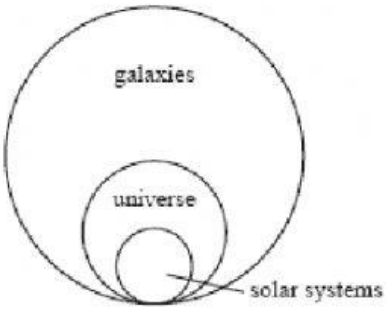

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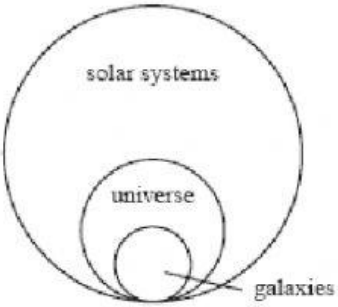

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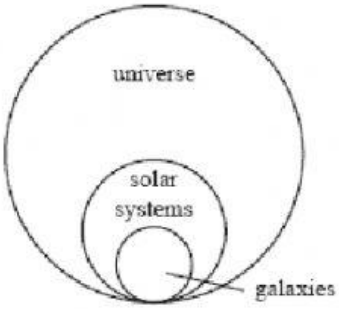

____ 14. Which of the following is the **best** estimate of the number of stars in a typical galaxy?

a. tens
b. hundreds
c. thousands
d. Billions

____ 15. The winter solstice occurs on either December 21 or 22, depending on the year. Which of the following statements **best** explains why the time of year the winter solstice occurs has the least amount of daylight in Massachusetts?

a. Earth is the farthest away from the Sun on the winter solstice.
b. Earth's rotational speed on its axis is greatest on the winter solstice
c. Earth is traveling around the Sun with the greatest speeds on the winter solstice
d. Earth's northern hemisphere is tilted away from the Sun on the winter solstice.

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