Name: _____
Date: _____ Class: _____

6th Grade Science MSL Practice

1. When a light bulb is lit, electrical energy is changed into **light energy** and (6.P.3.1)
   A. chemical energy
   B. magnetic energy
   C. heat energy
   D. mechanical energy

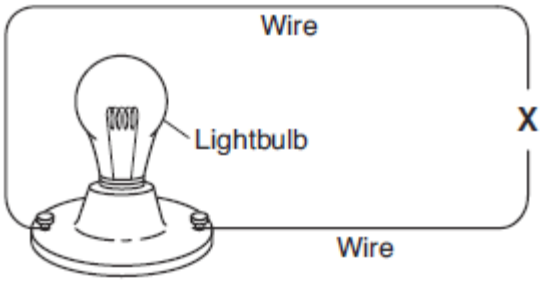
2. Which form of energy is produced when a guitar string vibrates? (6.P.1.3)
   A. chemical
   B. light
   C. magnetic
   D. sound

3. Why do some animals **hibernate** in the winter? (6.L.2.3)
   A. to find food for their young
   B. to adapt to environmental changes
   C. to attract a mate
   D. to avoid predators

4. The function of a plant's roots is to take in (6.L.2.1)
   A. light and water.
   B. light and air.
   C. nutrients and water.
   D. nutrients and soil.

5. When two animals live in the same area and depend on the same organism for food, they are (6.L.2.3)
   A. competing
   B. decomposing
   C. germinating
   D. hibernating

6. An incomplete electric circuit is shown below. The light bulb is not lit. (6.P.3.3)



Which object placed at X would complete the circuit and light the bulb?
   A. magnet
   B. battery
   C. metal nail
   D. second light bulb

7. During winter, the white fur of an arctic fox blends in with the snow. This **adaptation** is called (6.L.2.3)
    A. hibernation.
    B. migration.
    C. camouflage.
    D. movement.

8. The table lists the volume and mass of four substances. Which substance has the **lowest** density? (6.P.2.3)

Substance	Volume (cm^3)	Mass (g)
brick	71	100
ice	109	100
water	100	100
wax	56	100

    A. brick
    B. ice
    C. water
    D. wax

9. Lucy noticed that her coin collection had begun to tarnish. Some of the metal in the coins had begun to change color. The formation of **tarnish** is most similar to which of the following changes? (6.P.2.3)
    A. shredding a piece of paper into hundreds of tiny strips
    B. dropping a dinner plate on the floor
    C. melting ice cubes in a glass of juice
    D. burning a piece of paper to ashes in a fireplace

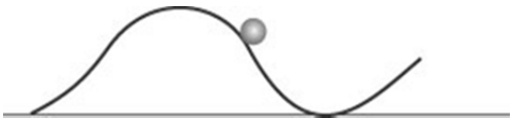
10. When walking along an asphalt street after sundown, a person often feels heat coming off the pavement. The heat is moving from the asphalt to the person by (6.P.3.1)
    A. conduction.
    B. convection.
    C. expansion.
    D. radiation.

11. Which is an example of **kinetic** energy? (6.P.1.1)
    A. sitting at a desk reading a book
    B. lifting a book from the floor to the table
    C. holding a bag full of heavy books
    D. pushing against a large tree

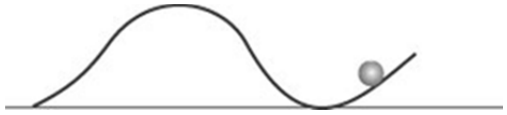
12. Which statement best explains how a **lunar** eclipse occurs? (6.E.1.1)
    A. Earth is aligned between the Sun and the Moon, and is casting its shadow on the Moon
    B. The Moon is aligned between Earth and the Sun, and is blocking all or part of the Sun's surface.
    C. The Sun is aligned between Earth and the Moon, and the Moon's surface cannot be seen.
    D. Venus is aligned between the Sun and Earth, and the Sun's surface cannot be seen.

13. Which ball has the **MOST** potential energy? (6.P.1.1)

A. 

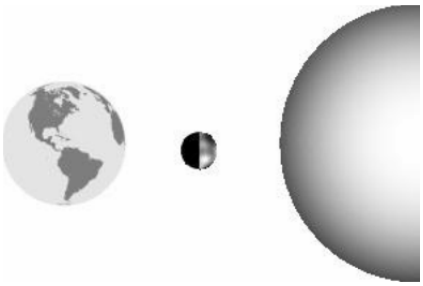
B. 

C. 

D. 

14. What keeps the planets in orbit around the Sun? (6.E.1.1)
    A. Distance
    B. Gravity
    C. Shape
    D. light

15. Look at the diagram below of the Sun, the Moon, and Earth. Which phase of the Moon would be seen by people on Earth? (6.E.1.1)



    A. full moon
    B. new moon
    C. waxing gibbous
    D. waning gibbous

16. If we compare the temperature and pressure of the Earth's mantle to the core, what differences can we expect as we move downward into the Earth? (6.E.2.1)
    A. Both the temperature and pressure increase.
    B. Both the temperature and pressure decrease.
    C. The temperature decreases and the pressure increases.
    D. The temperature increases and the pressure decreases.

17. The Sun’s gravity holds each planet in its orbit. Pluto, a dwarf planet, is farther away from the Sun than Earth is. How does the effect of the Sun’s gravity on Pluto compare with the effect of the Sun’s gravity on Earth? (6.E.1.2)
    A. The Sun has the same gravitational pull on all planets that are in orbit.
    B. The Sun has more gravitational pull on Pluto because it is smaller.
    C. The Sun has less gravitational pull on Earth because it is closer.
    D. The Sun has less gravitational pull on Pluto because it is farther away.

18. When limestone is exposed to enough heat and pressure, it goes through physical changes. These changes can turn limestone into a different kind of rock called marble. Which of these **BEST** describes marble? (6.E.2.3)
    A. It is an igneous rock.
    B. It is a synthetic rock.
    C. It is a sedimentary rock.
    D. It is a metamorphic rock.

19. A student observes a mineral that is green and not as hard as a nail. Based on the chart, which mineral is the student observing? (6.E.2.3)

Mineral Identification Chart

Mineral	Color	Hardness
Amphibole	Green to black	Less hard than a nail
Feldspar	White, pink, gray, green	Harder than glass
Garnet	Dark red	Harder than glass
Quartz	Colorless, gray, white	Harder than glass

    A. Amphibole
    B. Feldspar
    C. Garnet
    D. Quartz

20. Extrusive rocks have small grains because they — (6.E.2.3)
    A. cool quickly.
    B. harden underground
    C. contain rare minerals.
    D. have a rough mixture.

21. Which is a gaseous planet? (6.E.1.2)
    A. Jupiter
    B. Mars
    C. Earth
    D. Venus

22. Which planet is closest to the Sun? (6.E.1.1)
    A. Jupiter
    B. Mars
    C. Venus
    D. Mercury

23. The major process that wears down whole mountain ranges is (6.E.2.2)
    A. earthquakes.
    B. weathering.
    C. plate movement.
    D. silt deposition.

24. William put a sugar cube in a cup of hot water. After a period of time, what happened to the sugar cube? (6.P.2.3)
    A. It dissolved.
    B. It stayed on the bottom of the cup.
    C. It evaporated.
    D. It changed color.

25. Plastic, wood, and iron are **ALL** made of (6.P.2.1)
    A. energy.
    B. plant or animal cells.
    C. carbon molecules.
    D. atoms.

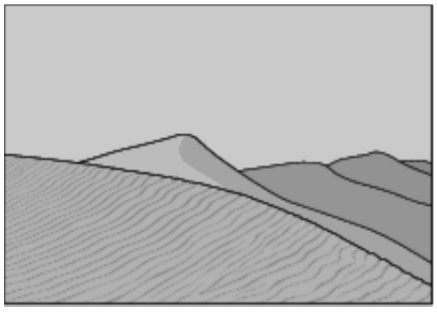
26. The plastic coating around an electric cord is used to (6.P.3.3)
    A. help the electricity move through the wires.
    B. stop the electricity from shocking you.
    C. cover the wires so the cord looks pretty.
    D. use less wire so the cord costs less.

27. Why does the amount of daylight change during the course of a year? (6.E.1.1)
    A. The amount of light and heat radiated by the Sun changes at different times of the year.
    B. The distance between the Sun and Earth changes from summer to winter.
    C. The North Pole points more toward the Sun at one time of the year than another.
    D. Earth rotates at different speeds at different times of the year.

28. Kim puts an ice cube in a beaker and it melts. This is a good example of (6.P.2.3)
    A. a physical change.
    B. a chemical change.
    C. an experiment.
    D. an analysis.

29. Joe and Jill made a volcano using baking soda and vinegar. When they put them together the volcano foamed and bubbled. This is an example of? (6.P.2.3)
    A. a weight change.
    B. a chemical change.
    C. a physical change.
    D. a density change.

30. The Sahara Desert in Africa has a landscape of huge sand dunes. This landscape is constantly changing. (6.E.2.2)

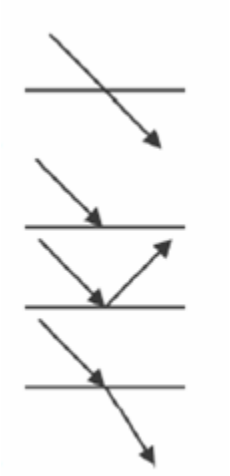


Which force in nature causes this constant change of the desert landscape?
    A. earthquakes
    B. hurricanes
    C. lightning strikes
    D. wind storms

31. Which statement describes a volcano erupting? (6.E.2.2)
    A. Glacier materials are moved by gravity.
    B. Magma is forced out of an opening in Earth's crust.
    C. Pressure in Earth's crust causes layers of rock to slide.
    D. Pressure in Earth's crust becomes so great that the layers of rock buckle and fold.

32. Energy from an earthquake travels (6.E.2.2 & 6.P.1.1)
    A. at the same speed through solids, liquids, and gases.
    B. fastest through the gases of Earth’s atmosphere.
    C. as light waves that warm the rock underground.
    D. as seismic waves that cause matter to vibrate.

33. Which drawing is an example of reflection? (6.P.3.2)

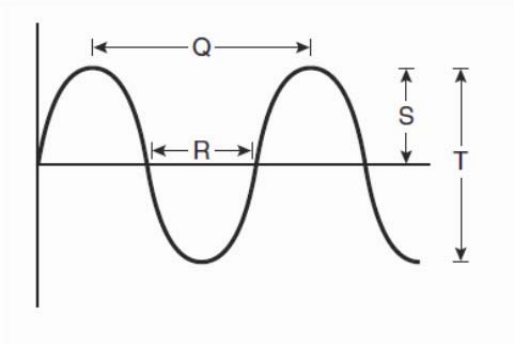
A. 

B.

C.

D.

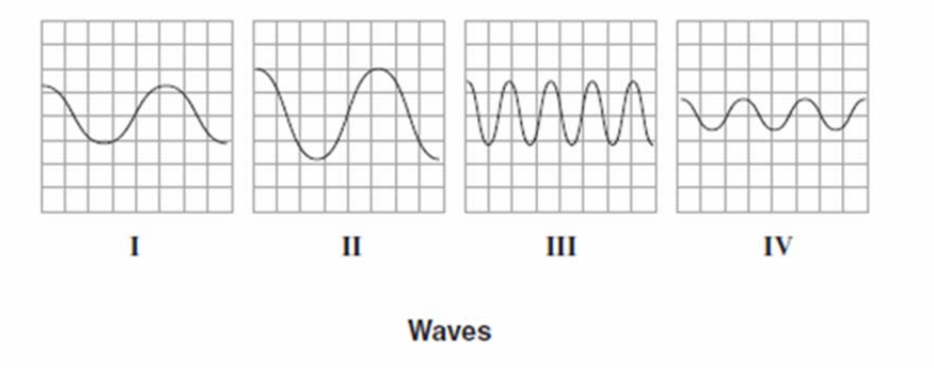
34. Which label on the model represents a wavelength? (6.P.1.1)



    A. Q
    B. R
    C. S
    D. T

35. The _____ is Earth's thinnest layer. (6.E.2.1)
    A. inner core
    B. crust
    C. mantle
    D. outer core

36. An oscilloscope is an instrument that can be used to display the properties of waves. Melanie studies four pictures of waves from an oscilloscope. (6.P.1.1)



Which picture shows waves with the shortest wavelength?

A. I
B. II
C. III
D. IV

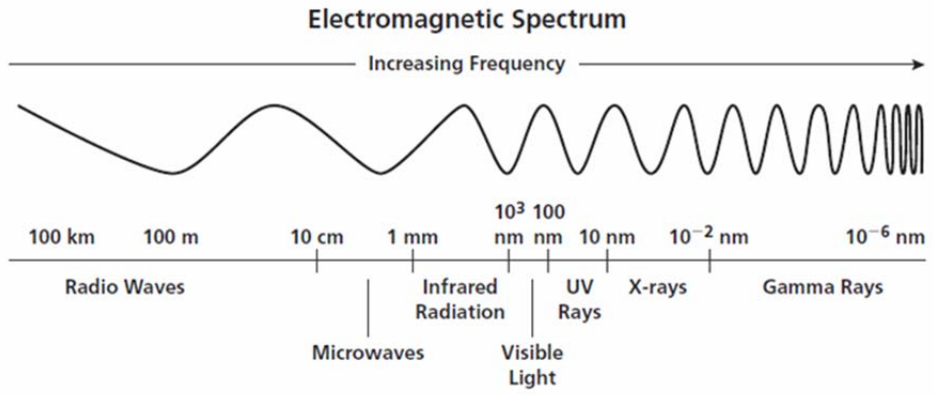
37. Use the list below to answer this question. (6.P.3.3)

- plastic
- rubber
- glass
- paper

Which name applies to these materials because of their electrical properties?

A. connectors
B. regulators
C. conductors
D. insulators.

38.



Which type of electromagnetic wave has a wavelength longer than that of yellow light? (6.P.1.1)

A. Infrared Radiation
B. UV Rays
C. X-rays
D. Gamma Rays

39. There are two types of eclipses—solar and lunar. Describe one way these eclipses are similar. Describe one way these eclipses are different. (6.P.2.3)

40. What type of rocks are formed from heat and pressure? Explain the difference in the sedimentary rocks, igneous rocks, and metamorphic rocks. (6.E.2.1)