Science Test Review: Forms of Energy

1. Define Energy:

2. Two Main Types of Energy are ____________________ and ____________________.

3. Define Potential Energy:____________________________________________

4. In the diagram to the right, at which point does the sled have the greatest potential energy?_____________

5. Define Kinetic Energy:

6. The amount of Kinetic energy a moving object has depends on its_________ and ____________.

7. In each of the following pairs, CIRCLE which would have more kinetic energy rolling down a hill:
   A marble or a boulder
   A beach ball or bowling ball
   A Toy car or a Hummer
   **Explain why you chose the ones you chose?**__________________________________

8. In the diagrams below, identify the greatest Kinetic and greatest potential energy

9. What is pictured to the left? _________________

10. At which points does the pendulum have the most potential energy?_____

11. At which point does the pendulum have the most kinetic energy?___

12. At which points on the pendulum are the kinetic and potential energy equal? _______

13. If you place a block at point C, what would happen to the block?_____________________
   **Why?**
14. Chemical Energy: ______________________________________________________________

Example: _______________________________

15. Nuclear Energy: ______________________________________________________________

Example: _______________________________

List two ways nuclear energy is produced: ______________________________________________


Example: _______________________________

17. Stored Mechanical: _____________________________________________________________

Example: _______________________________

Define the Forms of Potential Energy:

18. Radiant Energy: _________________________________________________________________

Example: _______________________________

*List the different forms of Radiant Energy: ____________________________________________

19. Thermal Energy: _______________________________________________________________

Example: _______________________________

20. Motion or Mechanical Energy: ____________________________________________________

Example: _______________________________

21. Sound Energy: _________________________________________________________________

Example: _______________________________

22. Electrical Energy: ______________________________________________________________

Example: _______________________________

23. Energy of microwaves, radio waves, x-rays, ultraviolet rays, and light waves are all forms of ___________________energy

Define the Forms of Kinetic Energy:

24. Define Energy transformation:__________________________________________

Energy Transformations (Conversions)

24. Define Energy transformation:__________________________________________
25. What does the law of conservation of energy state?__________________________
_____________________________________________________________________
Give an example:_________________________________________________________________

26. In every energy conversion, some energy is always converted into _____________
due to friction.

27. What is the energy transformation for a resource to produce electricity?
Flashlight: 

(battery) → (electricity) → (resistor creates heat) → (Light)

28. Using number 27, diagram the energy transformations that occur in the following:
Hot Plate

Windmill

Toaster

Gas Stove

Car Engine

Hair Dryer

29. __________________ energy in the sugars and starches of food fuels all your body functions and
movements, and provides the thermal energy that keeps your body temperature constant.

Heat/Thermal Energy Transfer

DEFINE:
30. convection-_________________________________________________________________
31. conduction-_________________________________________________________________
32. radiation-___________________________________________________________________

33. Identify the following examples as convection, conduction or radiation:
* Ice in a soft drink melts due to _____________________________
* Boiling an egg in water ________________________________
* A pot touching a hot stove _______________________________
* A small heater heating a bathroom _________________________
* A cold blooded reptile warming itself from the sun _______________

34. Explain how heat moves through liquids during convection. ____________________________
______________________________________________________________________________
~Draw a picture showing this.