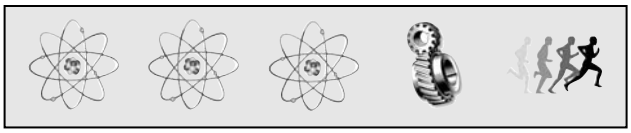
Name: _____

Date: _____ Grade: _____

SECTION QUIZ 12-3



Remember:
Score an average of 85% or higher on all three quizzes and you may be exempt from the chapter test!



Congratulations! You have completed this section!
Answer the following questions to test your understanding of the material. When you are finished, hand in your quiz to your teacher. Each answer is worth 2.5 points.

Fill in the blank or circle True or False

1. A break in _____ stops the electric current.
   (a) a series circuit (c) a wire
   (b) one of the paths of a parallel circuit (d) in a circuit board

2. Ohm's Law states that current is _____ proportional to voltage.
   (a) not (b) directly (c) routinely (d) inversely

3. Ohm's Law states that current is _____ proportional to resistance.
   (a) not (b) directly (c) routinely (d) inversely

4. Another name for resistance is _____.

5. The total voltage in a parallel circuit is equal to the voltage drop across any one of the paths of resistance of the parallel circuit.
   (a) True or (b) False

6. The total current in a parallel circuit is the _____ of the current through each path.
   (a) difference (b) product (c) reciprocal (d) sum

7. In a parallel circuit, the path with the most resistance carries the _____ current.
   (a) least (b) most (c) heavy (d) wild

8. A circuit in which electricity flows freely is described as _____.

9. One way to check the freshness of batteries is to measure their _____.

10. The expression "force times distance" is the definition of: _____.
    (a) acceleration (b) mechanical advantage (c) power (d) work

11. A _____ is the metric unit of force.

12. Power is how quickly: _____.
    (a) a car starts (b) work is done (c) voltage is applied (d) success

13. In the metric system, the unit of work is the _____.

14. A kilowatt-hour is a measure of electrical energy (work).
    (a) True or (b) False

15. The Mars Climate Orbiter burned up in the Martian atmosphere because the ground control navigation team confused _____ and _____ units of measure.

16. Bare wires cause _____.

17. The metal conduit for wires, metal junction boxes and metal boxes around wall outlets is to conduct electricity to the person plugging in an electrical appliance.
(a) True or (b) False

18. Another name for a low resistance short cut is: _____.
(a) ground (b) heating effect resistor (c) short circuit (d) none of these

19. A fuse may not act quickly enough to keep a person from being electrocuted.
(a) True or (b) False

20. Electrical appliances fall into four broad categories: _____, heat, mechanical action and electronic devices.

21. An example of a device that produces mechanical action is a(n): _____.
(a) electric motor (b) light (c) television (d) toaster

22. Philo T. Farnsworth contributed to the invention of the television after retiring from Thomas A. Edison's company.
(a) True or (b) False

23. Because it was attracted to a magnet, Samuel knew his object had to be a: _____.
(a) penny (b) glass marble (c) plastic paperclip (d) steel thumbtack

24. Geiger counters click several times every minute even when no radioactive material is present because: _____.
(a) of background radiation
(b) of temperature changes
(c) they are constantly zapped by electrons
(d) to show that they are working

25. Naturally _____ elements in the Earth's crust produce some background radiation.

26. Cosmic rays are guided toward the North or South Poles because the rays are made of: _____.
(a) charged particles
(b) electromagnetic waves
(c) reindeers
(d) sound waves

27. Cosmic rays are one source of _____ radiation.

28. Most cosmic rays are slow moving and massive uranium atoms.
(a) True or (b) False

29. Physicists study the interaction of _____ and _____.

30. Theoretical research is also known as _____ research.

SECTION QUIZ 12-3

31. Rather than testing nuclear weapons underground, they are tested: _____.
    (a) by computer simulation (c) on the Moon
    (b) in the atmosphere (d) under the ocean

32. Cold fusion is a process that: _____.
    (a) is the same as fission (c) works very well and is efficient
    (b) is the same as hot fusion (d) is a theory being researched

33. Cryogenics deals with: _____.
    (a) mechanical intelligence (c) cosmic energy
    (b) very cold temperatures (d) life on other planets

34. Cutting down a tree to learn its age is known as _____ testing.

35. Michael Faraday had exceptional mathematical ability.
    (a) True or (b) False

36. *"There has never been, and cannot be, a good life without _____."*

37. *"Nothing in the world can take the place of _____."*

38. *"Giving a helping hand is often better than giving _____."*

39. *"No one is useless in this world who _____ the burdens of another."*

40. *"It is not good to have zeal without _____, not to be hasty and miss the way."*