Science 10 Exam Review
Practice Multiple Choice

1. What is the charge of an electron?
    a. Positive
    b. Negative
    c. Neutral

2. What is the term for electricity that does not move?
    a. Static
    b. Current
    c. Kinetic
    d. Ionic

3. A balloon is rubbed in human hair. How will the electrons be transferred?
    a. Balloon to hair
    b. Hair to balloon
    c. Electrons will not move

4. Positive Charges attract ____ charges.
    a. Positive
    b. Negative
    c. Neutral
    d. Both positive and negative

5. When an object is charged without touching, it is said to be charged by:
    a. Friction
    b. Contact
    c. Induction
    d. Static

6. Electrons can move the easiest through which of the following materials?
    a. Bread
    b. Copper
    c. Hair
    d. Plastic

7. What is the name for the material that does not allow electrons to easily travel through it?
    a. Insulator
    b. Conductor
    c. Terminator
    d. Ammeter

8. Electric potential is known as:
    a. Current
    b. Resistance
    c. Circuitry
    d. Voltage

9. What device measures the electrical energy in a circuit?
    a. Ammeter
    b. Thermometer
    c. Voltmeter
    d. Ohmmeter

10. Which of the following measures the electric current in a circuit?
    a. Ammeter
    b. Thermometer
    c. Voltmeter
    d. Ohmmeter

11. In a circuit, what is another name for a light bulb?
    a. Power source
    b. Conductor
    c. Switch
    d. Load

12. A battery consists of two or more _____ in series.
    a. Cells
    b. Light bulbs
    c. Ammeters
    d. Switches

13. A circuit contains three light bulbs in series. Where should a switch be places to turn all the lights on or off?
    a. Next to the first light bulb
    b. Next to the second light bulb
    c. Next to third light bulb
    d. Anywhere in the circuit

14. Two identical light bulbs are connected in series. How will the brightness of those lights change if another identical bulb is added in series.
    a. Lights will get brighter
    b. Lights will get dimmer
    c. Brightness will not change

15. Two identical light bulbs are connected in parallel. A third identical light is connected in parallel. Theoretically, how will the brightness of the original lights change?
    a. Lights will get brighter
    b. Lights will get dimmer
    c. Brightness will not change

16. Using Ohm's law, what is the current drawn from a 12V battery if the circuit contains 5.5 Ohms of resistance?
    a. 6.5A
    b. 66A
    c. 0.46A
    d. 2.18A

17. A 2.3A current is drawn from a 24V battery. What is the resistance in the circuit?
    a. 10.4 ohms
    b. 55.2 ohms
    c. 0.095 ohms
    d. 21.7 ohms

18. In 1997, *Thrust SSC,* the world's fastest jet-engine car, traveled 608m at an average speed of 350m/s. The length of time it took in ***minutes*** was:
    a. 104.4
    b. 1.7
    c. 0.0096
    d. 0.028

19. The area under a velocity-time graph represents?
    a. Slope
    b. Distance
    c. Time
    d. Acceleration

20. Given the following number: 234506 which of the following is correctly rounded to 3 significant digits.
    a. 234 000
    b. 235 000
    c. 234
    d. 23500

21. An object travels equal amounts of distance in equal amounts of time. This is an example of _____.
    a. Average acceleration
    b. Average speed
    c. Constant acceleration
    d. Constant speed

22. A car travels 275 km in 3.5 hours. What is the average speed of the car?
    a. 78.6 km/h
    b. 271.5km/h
    c. 0.013km/h
    d. 962.5km/h

23. How much time does it take a car driving 32m/s to drive 272m?
    a. 8704s
    b. 0.12s
    c. 8.5s
    d. 240s

24. A cart rolls down a hill and accelerates at $3.5 m/s^2$ for 8.0s. If the initial speed was 3.0m/s what is its final speed?
    a. 35m/s
    b. 28m/s
    c. 25m/s
    d. 31m/s

25. What is the acceleration of an object that goes from 15m/s to 62m/s in 11.8s? (note that all the answers have the unit m/s^2)?
    a. 6.5
    b. 4.0
    c. 20.2
    d. 63

26. What was the initial speed of an object that accelerated at $5.5 m/s^2$ for 25 seconds to reach a final speed of 185m/s?
    a. 47.5m/s
    b. 322m/s
    c. 0.0m/s
    d. 1.3m/s

27. How many seconds are required for a car to go from 12m/s to 42m/s under an acceleration of $5.0 m/s^2$?
    a. 0.17s
    b. 11s
    c. 6.0s
    d. 150s

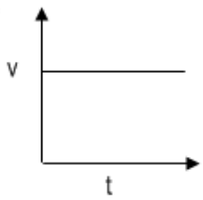
28. The average speed and the instantaneous speed will be the same in which one of the following examples?
    a. an average speed taken at the bottom of an incline as a skateboarder travels up the incline and the instantaneous speed taken when he reaches the top of the incline
    b. any point as a leaf is falling from a tree to the ground
    c. a car traveling at 80km/h
    d. a car traveling at 60km/h and then speeding up to 80 km/h

29. Using the precision rule what would be the correct answer to the following question:

    5.55 m + 12.8 m - 6.565 m

    a. 11.785
    b. 11.79
    c. 11.8
    d. 11.7

30. Given the following graph what does it represent?



a. Increasing Speed
b. Zero Speed
c. Increasing acceleration
d. Zero acceleration

31. This is a possible unit for acceleration km/h^2
a. True
b. False

32. Compounds held together by ions are called _____ compounds.
a. Molecular
b. Super
c. Weak
d. Ionic

33. How many electrons in the valence shell of fluorine?
a. 1
b. 4
c. 7
d. 8

34. Molecular compounds are formed when elements _____.
a. Exchange protons
b. Exchange electrons
c. Share electrons
d. Share protons

35. What is the name of this compound: $CaCl_2$
a. Calcium dichloride
b. Calcium chlorine
c. Calcium chloride
d. Monocalcium dichloride

36. Is this the chemical formula for aluminum fluoride: Al_2F_3
a. True
b. False

37. Is this the chemical formula for dinitrogen hexaoxide: N_2O_5
a. True
b. False

38. What is the name for this compound: SO_3
a. Sodium trioxide
b. Sulfur trioxide
c. Sodium pentaoxide
d. Sulfur oxide

39. Is this the formula for magnesium oxide: Mg_2O_2
a. True
b. False

40. How many electron(s) does bromines want to gain?
a. 1
b. 2
c. 3
d. 4

41. The set of elements contain only metals is:
a. Mg, Fe, N
b. Ca, K, Br
c. Na, K, Zn
d. Ba, O, Br

42. What types of bonds are formed between two non-metals?
a. Covalent
b. Molecular
c. Ionic
d. Shared

43. In a chemical change the substance changes its:
a. Composition
b. Size
c. Shape
d. Mass

44. An atom becomes an ion with a charge of -2 when it:
a. Gains 2 protons
b. Loses 2 neutrons
c. Loses 2 electrons
d. Gains 2 electrons

45. The most unreactive group of elements can be found in group _____.
a. 17
b. 1
c. 2
d. 18

46. What type of reaction is represented by the following chemical equation? $Na + Br_2 \rightarrow NaBr_2$
a. Decomposition
b. Combustion
c. Synthesis
d. Single Replacement

47. Which of the following is a product in all combustion reactions?
    a. Hydrogen
    b. Carbon
    c. Carbon dioxide
    d. Carbon monoxide

48. What type of reaction is represented by the following chemical equation? $Ca_3(PO_4)_2 \rightarrow Ca + PO_4$
    a. Synthesis
    b. Decomposition
    c. Single replacement
    d. Double replacement

49. Which of the following is in the orbit around the nucleus:
    a. Protons
    b. Neutrons
    c. Electrons

50. Which one of the following in an example of a change of state?
    a. Salt is dissolved in water
    b. An ice cube melts
    c. An ice cube is broken into many pieces
    d. Sodium and chlorine combine to produce table salt