

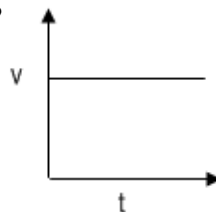
**Science 10 Exam Review
Practice Multiple Choice**

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 placed 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 3.5m/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 5.5m/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 5.0m/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:
 $5.55\text{ m} + 12.8\text{ m} - 6.565\text{ m}$
- 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 bromine 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? $\text{Na} + \text{Br}_2 \rightarrow \text{NaBr}_2$

- a. Decomposition
- b. Combustion
- c. Synthesis
- d. Single Replacement

47. Which of the following is a product in all combustion reactions?
- Hydrogen
 - Carbon
 - Carbon dioxide
 - Carbon monoxide
48. What type of reaction is represented by the following chemical equation? $\text{Ca}_3(\text{PO}_4)_2 \rightarrow \text{Ca} + \text{PO}_4$
- Synthesis
 - Decomposition
 - Single replacement
 - Double replacement
49. Which of the following is in the orbit around the nucleus:
- Protons
 - Neutrons
 - Electrons
50. Which one of the following is an example of a change of state?
- Salt is dissolved in water
 - An ice cube melts
 - An ice cube is broken into many pieces
 - Sodium and chlorine combine to produce table salt
51. Fungi like mushrooms are an example of:
- Producer
 - consumer
 - decomposer
 - herbivore
52. Which of the following is an example of a carnivore?
- Tree
 - hawk
 - mouse
 - flower
53. An omnivore eats ONLY plants
- True
 - False
54. Which of the following describes a group of all the same species living in a specific area?
- Community
 - population
 - ecosystem
 - biome
55. The area where an animal does its living is considered its:
- Niche
 - habitat
 - house
 - ecosystem
56. A plant is considered to be a:
- Consumer
 - herbivore
 - producer
 - omnivore
57. An ecosystem describes the interactions that occur between organisms and their environment:
- True
 - False
58. Which of the following describes an animal which eats only plants
- Vegetarian
 - vegan
 - producer
 - herbivore
59. A consumer describes an animal that is not able to make its own food.
- True
 - False
60. Which of the following describes an animal that no longer exists anywhere in the world?
- Endangered
 - threatened
 - extinct
 - extirpated
61. A habitat describes how an animal lives:
- True
 - False
62. An animal that no longer exists in one area of the country, but still exists in others is considered:
- Endangered
 - extirpated
 - threatened
 - extinct
63. A food chain is a complex web of animals and plants showing various options for what eats what.
- True
 - False
64. An example of an autotroph would be a deer
- True
 - False

65. Which of the following describes a group of different species all living in one area?
a. **Community** b. population c. biome d. ecosystem
66. The atlantic salmon is considered an endangered species:
a. **True** b. False
67. How much energy is lost as you move through a food chain or web?
a. 10% **b. 90%** c. 80% d. 15%
68. Which of the following areas would have the greatest biodiversity?
a. Forest grassland ecotone c. Grassland ecosystem
b. Forest ecosystem d. Lake ecosystem
69. An organism that is NOT able to use its own energy to make food is called:
a. Omnivore **b. heterotroph** c. autotroph d. producer
70. Which of the following is an example of an abiotic factor in an ecosystem?
a. Mouse b. rabbit c. daisy **d. sunlight**
71. If the population of insects in a population decreases the frog population would increase:
a. True **b. False**
72. The grey fox is at risk of declining numbers at the fringe of its range or in some restricted area. It is:
a. Extirpated b. endangered **c. vulnerable** d. threatened
73. Populations of native species in the Great Lakes have suffered from the introduction of exotic species that causes difficulties most often because they:
a. Cause changes in water temperature
b. Increase the population of algae through the addition of nutrients
c. Interfere with the food chain by competing for sources of food
d. Lower the water level of the lakes
74. Select the correct order from the following choices. From simplest to most complex
a. ecosystem, population, community, organism
b. organism, population, community, ecosystem
c. population, organism, ecosystem, community
d. community, population, organism, ecosystem