Answers Science 10 Exam Review
Practice Multiple Choice

1. 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

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

3. 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

4. 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

5. 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

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

7. 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

8. 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

9. 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

10. 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

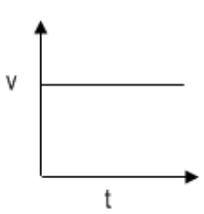
11. The average speed and the instantaneous speed will be the same in which one of the following examples?
    a. an average speed taken at the bottom of an incline as a skateboarder travels up the incline and the instantaneous speed taken when he reaches the top of the incline
    b. any point as a 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

12. 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

13. Given the following graph what does it represent?
    a. Increasing Speed
    b. Zero Speed
    c. Increasing acceleration
    d. Zero acceleration



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

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

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

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

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

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

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

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

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

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

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

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

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

27. 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

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

29. 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

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

31. 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

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

33. 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

34. Fungi like mushrooms are an example of:
    a. Producer b. consumer c. decomposer d. herbivore

35. Which of the following is an example of a carnivore?
    a. Tree b. hawk c. mouse d. flower

36. An omnivore eats ONLY plants
    a. True b. False

37. Which of the following describes a group of all the same species living in a specific area?
    a. Community b. population c. ecosystem d. biome

38. The area where an animal does its living is considered its:
    a. Niche b. habitat c. house d.ecosystem

39. A plant is considered to be a:
    a. Consumer b. herbivore c. producer d. omnivore

40. An ecosystem describes the interactions that occur between organisms and their environment:
    a. True b. False

41. Which of the following describes an animal which eats only plants
    a. Vegetarian b. vegan c. producer d. herbivore

42. A consumer describes an animal that is not able to make its own food.
    a. True b. False

43. Which of the following describes an animal that no longer exists anywhere in the world?
    a. Endangered b. threatened c. extinct d. extripated

44. A habitat describes how an animal lives:
    a. True b. False

45. An animal that no longer exists in one area of the country, but still exists in others is considered:
    a. Endangered b. extripated c. threatened d. extinct

46. A food chain is a complex web of animals and plants showing various options for what eats what.
    a. True b. False

47. An example of an autotroph would be a deer
    a. True b. False

48. Which of the following describes a group of different species all living in one area?
    a. Community b. population c. biome d. ecosystem

49. The atlantic salmon is considered an endangered species:
    a. True b. False

50. How much energy is lost as you move through a food chain or web?

a. 10% b. 90% c. 80% d. 15%

51. Which of the following areas would have the greatest biodiversity?

a. Forest grassland ecotone
b. Forest ecosystem
c. Grassland ecosystem
d. Lake ecosystem

52. An organism that is NOT able to use its own energy to make food is called:

a. Omnivore b. heterotroph c. autotroph d. producer

53. Which of the following is an example of an abiotic factor in an ecosystem?

a. Mouse b. rabbit c. daisy d. sunlight

54. If the population of insects in a population decreases the frog population would increase:

a. True b. False

55. 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

56. 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

57. 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