

Name: _____ Grade/Group: _____
Subject: Chemistry-7 Teacher: Mrs. Raj
Date: _____

Key

Test 2: Lab, Measurements, Matter and its Properties

Directions: Determine the best answer for each question. Circle your answer on this test packet and bubble your answer heavy and dark on the bubble sheet.

1. An example of a physical change is

C

- a. Baking a cake
- b. Reacting sodium with water
- c. breaking a glass
- d. burning wood

2. An example of a chemical change is

A

- a. Burning paper
- b. Mixing alcohol and water
- c. dissolving sugar in tea
- d. melting ice

3. The pure substances that cannot be broken down into any simpler substances are called

B

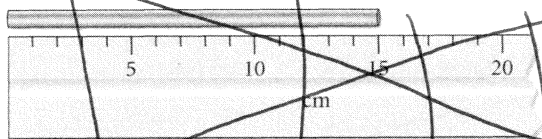
- a. Compounds
- b. Elements
- c. molecules
- d. bonds

4. Decanting is

C

- a. A process in which the more volatile liquid is boiled off.
- b. Dissolving a solid into a liquid.
- c. Separating a solid from a liquid pouring of the liquid.
- d. Heating a mixture two solids to fuse them together.

5. Read the length of the metal bar with the correct number of significant figures.



- a. 20 cm
- b. 15 cm
- c. 15.0 cm
- d. 15.00 cm

6. Which of the following is a mixture?

C

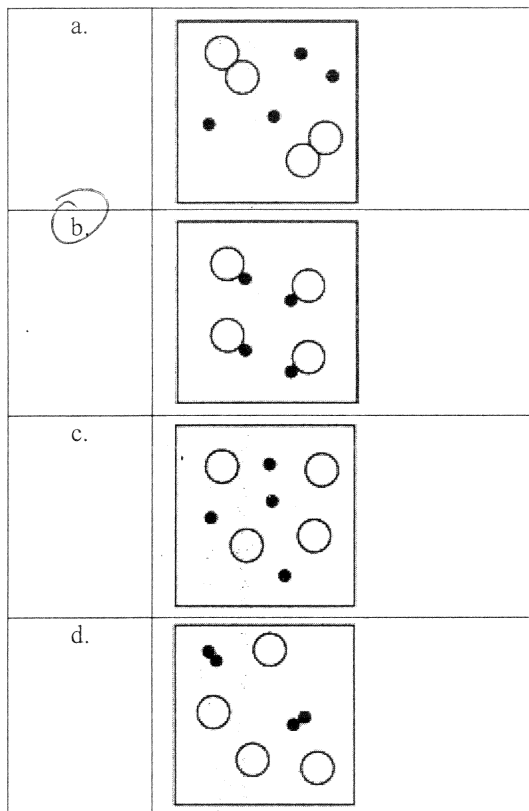
- a. Pure water
- b. Calcium carbonate
- c. Sugar water
- d. Calcium

7. Which of the following is a compound?

B

- a. Oil and water
- b. NaCl
- c. H₂
- d. Sodium

8. Which particle diagram represents one pure substance only?



9. Choose the property from the list that is **not** a physical property.

- a. Solubility c. density
b. Color d. reactivity

10. How many significant figures are in the value, 202.30 mL?

- a. 3 c. 5
b. 4 d. 0

11. How many significant figures are in the value, 0.0172 dg?

- a. 3 c. 5
b. 4 d. 0

12. Choose a physical change from the following

- a. Synthesizing a compound c. dissolving a substance
b. Burning d. decomposing

13. Boiling point, melting point, and density are some of an element's

- a. Nonreactive properties c. chemical properties
b. Physical properties d. pure properties

14. If a spoonful of salt is mixed in a glass of water, what is the mixture called?

- B
- a. Solute
 - ☒ b. Solution
 - c. solvent
 - d. element

15. As part of the calibration of a new laboratory balance, a 1.000 g mass is weighed with the following results:

Trial	Mass
1	1.201 ± 0.001
2	1.202 ± 0.001
3	1.200 ± 0.001

The balance is:

- a. Both accurate and precise
- ☒ b. Accurate but imprecise
- c. Precise but inaccurate
- d. Both inaccurate and imprecise

16. An element is

- B
- a. A mixture of atoms
 - ☒ b. All one type of atom
 - c. a compound
 - d. a solution

17. A compound is

- C
- a. A mixture of different atoms
 - ☒ c. more than one atom chemically combined in a specific ratio
 - b. All one type of atom
 - d. a solution

18. How many significant figures are there in 0.0006728 m?

- a. 7
- b. 3
- c. 8
- d. 4

19. Which one of the following is a **chemical** property?

- D
- a. Density = 5.43 g/cm^3
 - b. Dissolves in water
 - c. It is silvery white
 - ☒ d. reacts violently with oxygen

20. Which of the following is a **physical** property?

- A
- ☒ a. Dissolves in alcohol
 - b. Is flammable
 - c. rusts in water
 - d. is a product of burning coal

21. The agreement of a particular value with the true value is called a(n)

- a. Error
- b. Accuracy
- c. Precision
- d. Certainty

22. What safety items are required for lab?

- D
- a. Long pants
 - b. Closed-toe shoes
 - c. Safety goggles
 - ☒ d. All of the above

23. Which of the following is not considered characteristic of a chemical change?

D

- a. Gas formed
- b. Light released
- c. Heat released
- d. Freezing

24. Which of the following must be true for a chemical change to have occurred?

D

- a. A volume change
- b. A shape change
- c. A state change
- d. An identity change

25. Which of the following would be a physical change?

B

- a. Baking a cake
- b. Melting ice
- c. Burning a log
- d. An explosion

26. The volume of a liquid in a graduated cylinder should always be measured from:

D

- a. The nearest line
- b. The nearest even number
- c. The top of the meniscus
- d. The bottom of the meniscus

27. Which of the following is the measurement of the space an object occupies?

A

- a. Volume
- b. Mass
- c. Weight
- d. Temperature

28. Which of the following is the measurement of hot and cold?

D

- a. Volume
- b. Mass
- c. Weight
- d. Temperature

29. Hexane is combined with water in a test tube and two distinct layers form. This is an example of

D

- a. An element
- b. A compound
- c. A homogeneous mixture
- d. A heterogeneous mixture

30. How will you separate salt from a salt water?

B

- a. Filtration
- b. Evaporation
- c. Decantation
- d. Magnetic separation

31. "Wafting" is the proper technique for

D

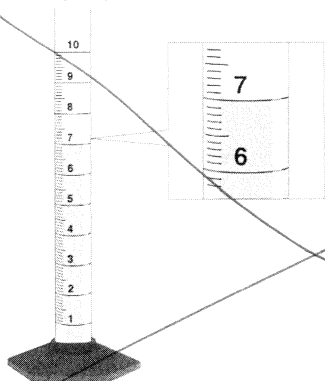
- a. neutralizing a spilled acid
- b. putting out burning clothing
- c. washing chemicals from the eye
- d. smelling a chemical substance

32. When can filtration technique be used?

C

- a. To separate oil and water
- b. To crystallize salt
- c. To separate solid from a liquid
- d. To separate a mixture of colored dyes

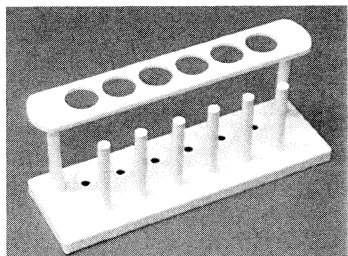
33. Give a proper measurement for the liquid in the graduated cylinder below.



- a. 6.9 mL
b. 6.90 mL

- c. 7.0 mL
d. 7.00 mL

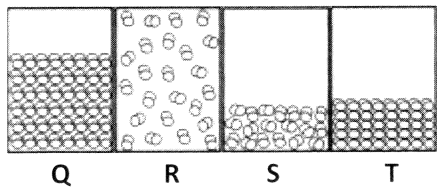
34. What is the name of the following piece of lab equipment?



- a. Drying rack
b. Test tube

- c. Test tube rack
d. Ring stand

35. Use the diagram below to answer the following question below



Each diagram shows the particles of a substance in a closed container. Which of these shows the substance that is most easily compressed?

- a. Q
b. R

- c. S
d. T

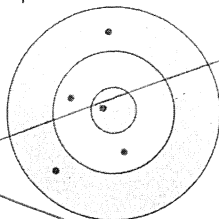
36. To separate iron filings from sand, you will use a _____.

- a. Funnel
b. Filter paper
c. Magnet
d. Beaker

37. A student does a calculation using her calculator and the number 280.57163 is shown on the display. If there are actually three significant figures, how should she show the final answer?

- a. 280
- b. 280.
- c. 281
- d. 0.280

38. The marks on the following target represent someone who is:



- a. accurate, but not precise
- b. precise, but not accurate
- c. both accurate and precise
- d. neither accurate nor precise

39. All the following are characteristic properties of phosphorus. Which one is a chemical property?

- a. Both red phosphorus and white phosphorus exist in solid allotropic forms.
- b. The red form melts at about 600°C and the white form melts at 44°C .
- c. The white form is soluble in liquid carbon disulfide, but is insoluble in water.
- d. When exposed to air, white phosphorus will burn spontaneously, but red phosphorus will not.

40. A student is asked to measure 12 mL of a liquid as precisely as possible. Which piece of equipment should the student select for this task?

- a. 25 mL beaker
- b. 25 mL graduated cylinder
- c. 25 mL Erlenmeyer flask
- d. 25 mL volumetric flask