

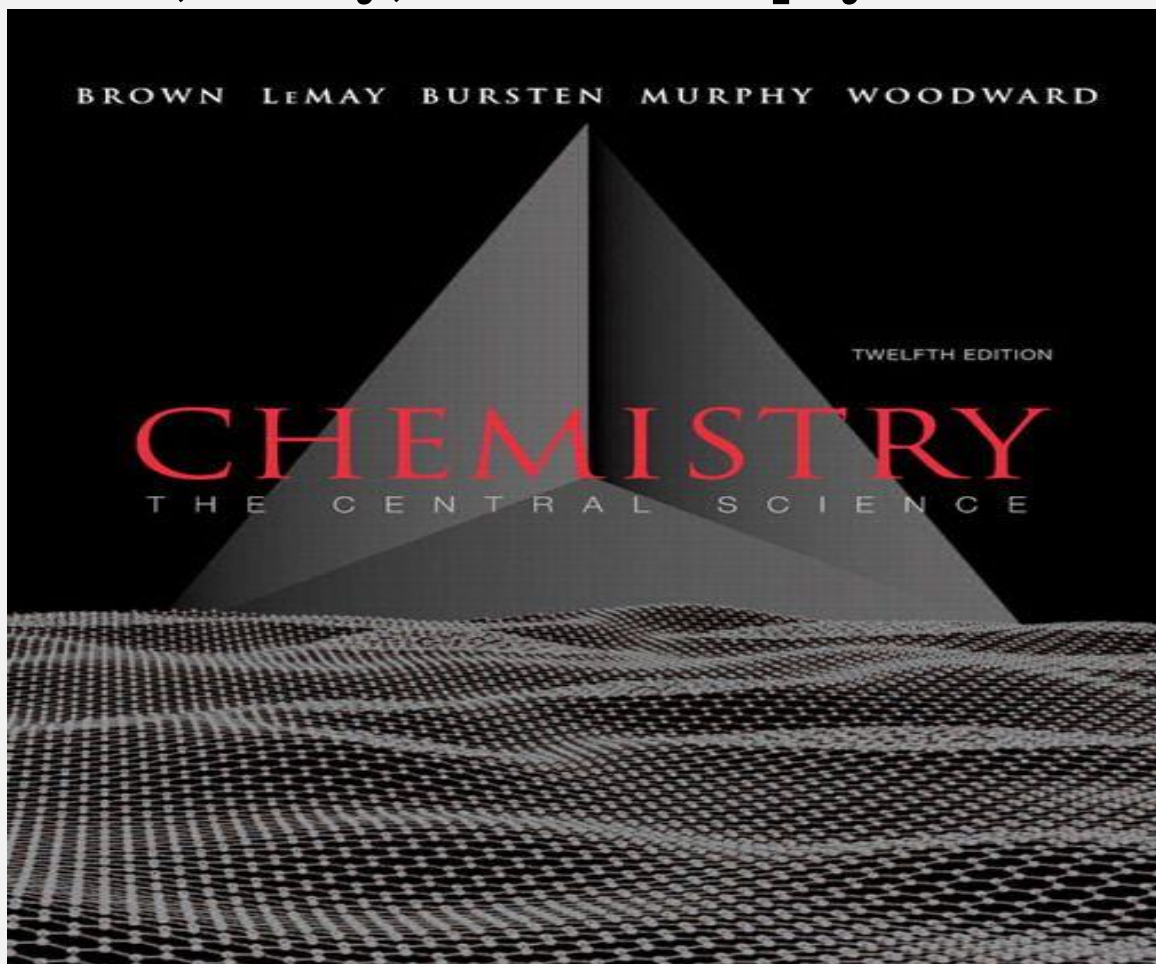
TEST BANK

CHEMISTRY:

The Central Science

12/EDITION

Brown, LeMay, Bursten Murphy Woodward



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Chemistry: The Central Science, 12e (Brown et al.) Test Bank

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Chemistry: The Central Science, 12e (Brown et al.)
Chapter 1 Introduction: Matter and Measurement

1.1 Multiple-Choice Questions

1) In the following list, only _____ is not an example of matter.

- A) planets
- B) light
- C) dust
- D) elemental phosphorus
- E) table salt

Answer: B

Diff: 2 Page Ref: Sec. 1.1

2) What is the physical state in which matter has no specific shape but does have a specific volume?

- A) gas
- B) solid
- C) liquid
- D) salts
- E) ice

Answer: C

Diff: 1 Page Ref: Sec. 1.2

3) The law of constant composition applies to _____.

- A) solutions
- B) heterogeneous mixtures
- C) compounds
- D) homogeneous mixtures
- E) solids

Answer: C

Diff: 1 Page Ref: Sec. 1.2

4) A combination of sand, salt, and water is an example of a _____.

- A) homogeneous mixture
- B) heterogeneous mixture
- C) compound
- D) pure substance
- E) solid

Answer: B

Diff: 1 Page Ref: Sec. 1.2

5) A small amount of salt dissolved in water is an example of a_____.

- A) homogeneous mixture
- B) heterogeneous mixture
- C) compound
- D) pure substance
- E) solid

Answer: A

Diff: 1 Page Ref: Sec. 1.2

6) Which one of the following has the element name and symbol correctly matched?

- A) P, potassium
- B) C, copper
- C) Mg, manganese
- D) Ag, silver
- E) Sn, silicon

Answer: D

Diff: 1 Page Ref: Sec. 1.2

7) Which one of the following has the element name and symbol correctly matched?

- A) S, sodium
- B) Tn, tin
- C) Fe, iron
- D) N, neon
- E) B, bromine

Answer: C

Diff: 1 Page Ref: Sec. 1.2

8) Which one of the following elements has a symbol that is not derived from its foreign name?

- A) tin
- B) aluminum
- C) mercury
- D) copper
- E) lead

Answer: B

Diff: 2 Page Ref: Sec. 1.2

9) Which one of the following is a pure substance?

- A) concrete
- B) wood
- C) salt water
- D) elemental copper
- E) milk

Answer: D

Diff: 1 Page Ref: Sec. 1.2

10) Which one of the following is often easily separated into its components by simple techniques such as filtering or decanting?

- A) heterogeneous mixture
- B) compounds
- C) homogeneous mixture
- D) elements
- E) solutions

Answer: A

Diff: 3 Page Ref: Sec. 1.2

11) Which states of matter are significantly compressible?

- A) gases only
- B) liquids only
- C) solids only
- D) liquids and gases
- E) solids and liquids

Answer: A

Diff: 1 Page Ref: Sec. 1.2

12) For which of the following can the composition vary?

- A) pure substance
- B) element
- C) both homogeneous and heterogeneous mixtures
- D) homogeneous mixture
- E) heterogeneous mixture

Answer: C

Diff: 2 Page Ref: Sec. 1.2

13) If matter is uniform throughout and cannot be separated into other substances by physical means, it is _____.

- A) a compound
- B) either an element or a compound
- C) a homogeneous mixture
- D) a heterogeneous mixture
- E) an element

Answer: B

Diff: 2 Page Ref: Sec. 1.2

14) An element cannot _____.

- A) be part of a heterogeneous mixture
- B) be part of a homogeneous mixture
- C) be separated into other substances by chemical means
- D) interact with other elements to form compounds
- E) be a pure substance

Answer: C

Diff: 2 Page Ref: Sec. 1.2

15) Homogeneous mixtures are also known as_____.

- A) solids
- B) compounds
- C) elements
- D) substances
- E) solutions

Answer: E

Diff: 1 Page Ref: Sec. 1.2

16) The law of constant composition says_____.

- A) that the composition of a compound is always the same
- B) that all substances have the same composition
- C) that the composition of an element is always the same
- D) that the composition of a homogeneous mixture is always the same
- E) that the composition of a heterogeneous mixture is always the same

Answer: A

Diff: 1 Page Ref: Sec. 1.2

17) Which of the following is an illustration of the law of constant composition?

- A) Water boils at 100°C at 1 atm pressure.
- B) Water is 11% hydrogen and 89% oxygen by mass.
- C) Water can be separated into other substances by a chemical process.
- D) Water and salt have different boiling points.
- E) Water is a compound.

Answer: B

Diff: 3 Page Ref: Sec. 1.2

18) In the following list, only_____is not an example of a chemical reaction.

- A) dissolution of a penny in nitric acid
- B) the condensation of water vapor
- C) a burning candle
- D) the formation of polyethylene from ethylene
- E) the rusting of iron

Answer: B

Diff: 2 Page Ref: Sec. 1.3

19) Gases and liquids share the property of_____.

- A) compressibility
- B) definite volume
- C) incompressibility
- D) indefinite shape
- E) definite shape

Answer: D

Diff: 1 Page Ref: Sec. 1.3

20) Of the following, only _____ is a chemical reaction.

- A) melting of lead
- B) dissolving sugar in water
- C) tarnishing of silver
- D) crushing of stone
- E) dropping a penny into a glass of water

Answer: C

Diff: 1 Page Ref: Sec. 1.3

21) Which one of the following is not an intensive property?

- A) density
- B) temperature
- C) melting point
- D) mass
- E) boiling point

Answer: D

Diff: 2 Page Ref: Sec. 1.3

22) Which one of the following is an intensive property?

- A) mass
- B) temperature
- C) heat content
- D) volume
- E) amount

Answer: B

Diff: 2 Page Ref: Sec. 1.3

23) Of the following, only _____ is an extensive property.

- A) density
- B) mass
- C) boiling point
- D) freezing point
- E) temperature

Answer: B

Diff: 2 Page Ref: Sec. 1.3

24) Which of the following are chemical processes?

1. rusting of a nail
2. freezing of water
3. decomposition of water into hydrogen and oxygen gases
4. compression of oxygen gas

A) 2, 3, 4

B) 1, 3, 4

C) 1, 3

D) 1, 2

E) 1, 4

Answer: C

Diff: 3 Page Ref: Sec. 1.3

25) In the following list, only _____ is not an example of a chemical reaction.