Name _____ Date _____ Class _____

1.1 CHEMISTRY

Section Review

Objectives

- Identify five traditional areas of study in chemistry
- Relate pure chemistry to applied chemistry
- Identify reasons to study chemistry

Vocabulary

- matter
- chemistry
- organic chemistry
- inorganic chemistry
- biochemistry
- analytical chemistry
- physical chemistry
- pure chemistry
- applied chemistry
- technology

Part A Completion

Use this completion exercise to check your understanding of the concepts and terms that are introduced in this section. Each blank can be completed with a term, short phrase, or number.

Matter is anything that has __1__ and occupies __2__.

Chemistry is the study of the __3__ of matter and the __4__ that matter undergoes. Chemistry has traditionally been divided into __5__ areas of study. Organic chemistry is the study of chemicals that contain __6__, while inorganic chemistry is primarily the study of chemicals that do not contain __7__.

Biochemistry is the study of the processes that take place in __8__. __9__ is focused on the composition of matter, while __10__ deals with the mechanism, the rate, and the __11__ that occurs when matter undergoes a change. A chemist is likely to be working in __12__ areas of chemistry at the same time.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____

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Part B True-False

Classify each of these statements as always true, AT; sometimes true, ST; or never true, NT.

_____ **13.** Organic chemistry is the study of chemicals that do not contain carbon.

_____ **14.** The goal of chemistry is to accumulate knowledge.

_____ **15.** Biochemistry involves the study of living organisms.

_____ **16.** An organic chemist uses analytical chemistry.

_____ **17.** Applied chemistry is used to attain specific goals.

Part C Matching

Match each description in Column B to the correct term in Column A.

Column A	Column B
_____ **18.** chemistry	**a.** anything that has mass and occupies space
_____ **19.** pure chemistry	**b.** study of essentially all chemicals that contain carbon
_____ **20.** organic chemistry	**c.** study of the composition of substances
_____ **21.** inorganic chemistry	**d.** study of essentially all chemicals that do not contain carbon
_____ **22.** technology	**e.** study of the chemistry of living organisms
_____ **23.** physical chemistry	**f.** study of the composition of matter and the changes it undergoes
_____ **24.** analytical chemistry	**g.** study of the mechanism, the rate, and the energy transfer that occurs when matter undergoes a change
_____ **25.** matter	**h.** the means by which a society provides its members with those things needed and desired
_____ **26.** biochemistry	**i.** the pursuit of chemistry knowledge for its own sake
_____ **27.** applied chemistry	**j.** research that is directed toward a practical goal or application

Part D Questions and Problems

Answer the following questions in the space provided.

28. Match each activity below to one of the five branches of chemistry.

a. determining the energy transfer when water boils _____

b. finding out how much nitrogen is in a sample of air _____

c. studying the process of photosynthesis in plants _____

d. manufacturing nylon, which contains carbon _____