

# Standardized Test Prep

## Test-Taking Tip

**True-False Questions** When the word *because* is placed between two statements that may or may not be true, you need to decide two things. First, are the statements both true, are they both false, or is one statement true and the other false. If both statements are true, you must then decide if the second statement is a correct explanation for the first statement.

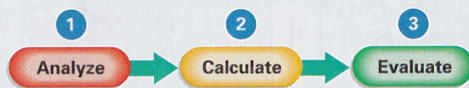
Select the choice that best answers each question or completes each statement.

- The branch of chemistry that studies chemicals containing carbon is \_\_\_\_ chemistry.  
a. physical                      c. analytical  
b. inorganic                    d. organic
- An analytical chemist is most likely to  
a. explain why paint is stirred before it is used.  
b. explain what keeps paint attached to the steel frame of an automobile.  
c. identify the type of paint chips found at the scene of a hit-and-run accident.  
d. investigate the effect of leaded paint on the development of a young child.
- Chemists who work in the biotechnology field are most likely to work with  
a. X-ray technicians.  
b. geologists.  
c. physicians.  
d. physicists.

Respond to each statement in Questions 4–6.

- Someone who wears contact lenses does not have to wear safety goggles in the lab.
- Eating food that is left over from an experiment is an alternative to discarding the food.
- For a student who has read the procedure, the teacher's pre-lab instructions are unnecessary.

Use the flowchart to answer Question 7.



- What should you do before you calculate an answer to a numeric problem and what should you do after you calculate the answer?

Use this paragraph to answer Questions 8–10.

- (1) On a cold morning, your car does not start. (2) You say, "Oh no! The battery is dead!". (3) Your friend who works on cars uses a battery tester and finds that the battery has a full charge. (4) Your friend notices a lot of corrosion on the battery terminals. (5) Your friend says, "Maybe corrosion is causing a bad connection in the electrical circuit, preventing the car from starting." (6) Your friend cleans the terminals and the car starts.
- Which statements are observations?
  - Which statements are hypotheses?
  - Which statement describes an experiment?

For each question there are two statements. Decide whether each statement is true or false. Then decide whether Statement II is a correct explanation for Statement I.

Statement I		Statement II
11. A hypothesis may be rejected after an experiment.	BECAUSE	Experiments are used to test hypotheses.
12. The supply of fossil fuels is limited.	BECAUSE	Scientists are always looking for new sources of energy.
13. Theories help you make mental models of objects that cannot be seen.	BECAUSE	Theories summarize the results of many observations and experiments.
14. Ideally, chemicals used to attack insect pests should be nonspecific.	BECAUSE	Scientists are looking for safer, more effective ways to protect crops.
15. All Internet sites that provide scientific information are equally reliable.	BECAUSE	All information on these sites is reviewed by qualified scientists.