

## Test-Taking Tip

Before you begin answering questions, determine the total number of questions on the test and how much time, on average, you have to answer each question. Try to allocate your time accordingly.

Directions: Choose the letter that best answers the question or completes the statement.

- Which of the following organisms is NOT a fungus?  
(A) mushroom (D) bread mold  
(B) morel (E) yeast  
(C) water mold
- Which of the following is characteristic of some types of fungi?  
I. Decomposition  
II. Parasitism  
III. Mutualism  
(A) I only (D) II and III only  
(B) II only (E) I, II, and III  
(C) I and II only
- Which of the following is a club fungus?  
(A) mushroom  
(B) yeast  
(C) bread mold  
(D) *Penicillium*  
(E) lichen
- Which of the following is the rootlike structure of a mold?  
(A) gametangium  
(B) zygosporangium  
(C) rhizoid  
(D) stolon  
(E) sporangiophore

Questions 5–7 Each of the lettered choices below refers to the following numbered statements. Select the best lettered choice. A choice may be used once, more than once, or not at all.

- Lichen
  - Mycorrhiza
  - Penicillium*
  - Mycelium
  - Chitin
- Cell wall carbohydrate
  - Tangled mass of hyphae
  - Fungal source of antibiotic

## Questions 8–10

Ripe grapes are covered with a grayish film called “bloom,” which contains yeasts and sometimes other microorganisms. A group of students prepared three test tubes of fresh, mashed grapes. They heated two of the test tubes to the boiling point, and then cooled them. They inoculated one of these test tubes with live yeast. They incubated all three test tubes at 30°C for 48 hours and then examined the test tubes for signs of fermentation—the presence of bubbles and alcohol. Their data are summarized in the table below.

Evidence of Fermentation		
Test-Tube Contents	Alcohol Odor (yes or no)	Bubbles (yes or no)
Unheated grape mash	yes	yes
Boiled grape mash	no	no
Boiled grape mash inoculated with yeast	yes	yes

- What is the independent variable in the students’ investigation?  
(A) presence of live yeast or other microorganisms  
(B) light  
(C) bubbles  
(D) odor of alcohol  
(E) time
- What is the dependent variable in the students’ investigation?  
I. Boiling  
II. Odor of alcohol  
III. Presence of bubbles  
(A) I only (D) II and III only  
(B) II only (E) I, II, and III  
(C) I and III only
- What can you conclude, based on the students’ results?  
I. Uninoculated, boiled grape mash does not seem to ferment over a 48-hour period.  
II. Boiled grape mash that contains live yeast undergoes fermentation.  
III. Grape mash does not ferment unless live yeast is added.  
(A) I only (D) II and III only  
(B) II only (E) I, II, and III  
(C) I and II only

## Standardized Test Prep

- C
- E
- A
- C
- E
- D
- C
- A
- D
- C

## Writing in Science

Paragraphs may vary. A typical response will mention fungi as decomposers, fungi as parasites, and fungi in mutualistic associations. As students provide examples of fungi that either maintain or disrupt an ecosystem, they should mention organisms from each of the four main groups of fungi discussed in Section 21–2, including the common molds, the sac fungi, the club fungi, and the imperfect fungi.

## Performance-Based Assessment

Students can use field guides for fungi or mushroom hunters’ guides. If there is a limited supply of field guides, divide the class into pairs or small groups. Before students attempt to find fungi, lead a brainstorming session with the class about where there are nearby wild areas, especially city, state, or national parks. The fungi students find will depend on the season and the area they search. For each example found, students should attempt an identification and note details of the environment in their field notebooks.



Your students can independently test their knowledge of the chapter and print out their test results for your files.