

Pretest

1. A die is rolled once. What is the probability of getting the number 5?
 - A. $\frac{1}{6}$
 - B. $\frac{2}{5}$
 - C. $\frac{1}{5}$
 - D. $\frac{5}{6}$
2. Select the meaning of the underlined word in the sentence.
The veterinary technician gave the dog a cursory examination.
 - A. Rigorous
 - B. Thorough
 - C. Concentrated
 - D. Quick
3. In the hierarchic system of classification, which of the following is the least inclusive?
 - A. Kingdom
 - B. Class
 - C. Genus
 - D. Species
4. How does the trachea remain open like a hollow tube?
 - A. Air pressure inside keeps it open.
 - B. Supporting cartilaginous rings keep it open.
 - C. It is reinforced with bone that cannot collapse.
 - D. Special muscles are working to keep the trachea open.
5. Write the following quantity, 1 kilojoule (kj), in powers of tens: _____
6. The quotient of y and -25 is -100 ; find the value of y .
 - A. 4
 - B. -2500
 - C. -4
 - D. 2500

Use the passage below to answer questions 7-9.

Doppler Effect

Have you ever wondered why the whistle of a traveling, distant locomotive predicts its approach several yards before anyone actually sees it? Or why an oncoming ambulance's screaming siren is heard momentarily several feet before the ambulance comes into full view, before it passes you, and why its siren is still heard faintly well after the ambulance is out of sight?

What you are witnessing is a scientific phenomenon known as the *Doppler effect*. What takes place is truly remarkable. In both of these instances, when the train or ambulance moves toward the sound waves in front of it, the sound waves are pulled closer together and have a higher frequency. In either instance, the listener positioned in front of the moving object hears a higher pitch. The ambulance and locomotive are progressively moving away from the sound waves behind them, causing the waves to be farther apart and to have a lower frequency. These fast-approaching modes of transportation distance themselves past the listener, who hears a lower pitch.

7. What is the main idea of the passage?
 - A. Trains and ambulances make distinctly loud noises.
 - B. Low-frequency waves make high-pitched sounds.
 - C. High-frequency waves make low-pitched sounds.
 - D. The Doppler effect explains why sound is heard initially more strongly and then faintly after a moving object has passed.
8. What is the meaning of the word *phenomenon* in the second paragraph?
 - A. Something that is lifeless to the senses
 - B. Something that is nonchalant
 - C. Something that is significant but unusual
 - D. Something that is chemical in origin
9. Which sound waves have a lower pitch?
 - A. Those waves that are closer together
 - B. Those waves that are farther apart
 - C. Those waves that travel a long distance
 - D. Those waves that travel a short distance
10. What word meaning "abrupt, intense" best fits in the following sentence?
The paramedics arrived at the home of a patient who was experiencing _____ chest pain.
 - A. Distal
 - B. Acute
 - C. Chronic
 - D. Dynamic
11. Which of the following sentences is grammatically incorrect?
 - A. We took him to the store, the library, and the restaurant.
 - B. We took him to the store and the library.
 - C. We took him to the store, and then we went to the library.
 - D. We took him to the store and then went to the library.

12. Sixteen (16) more than a number is nine (9). What is the number?
- A. -7
 - B. 7
 - C. -25
 - D. 25
13. Select the best word for the blank in the following sentence.
I will _____ that chart to the patient's room later today.
- A. Bring
 - B. Take
 - C. Brought
 - D. Took
14. The nucleus of an atom contains, or is made up of, which of the following?
- A. Protons and electrons
 - B. Protons only
 - C. Protons and neutrons
 - D. Neutrons and electrons
15. After observing an event, you develop an explanation. This explanation is referred to as which of the following?
- A. Hypothesis
 - B. Experiment
 - C. Conclusion
 - D. Theory
16. Which word in the following sentence should be replaced?
The department chairman stepped up to the podium.
- A. Podium
 - B. Stepped
 - C. Chairman
 - D. Up
17. Which of the following is a benefit of the intermolecular hydrogen bonding of water? (Select all that apply.)
- A. Water has a relatively high specific heat value.
 - B. Water has strong cohesive and adhesive properties.
 - C. Polarity of water allows it to act as a versatile solvent.
 - D. Water moves from higher to lower concentrations.
18. What is the best definition of the word *expedite*?
- A. Impel
 - B. Empathize
 - C. Accelerate
 - D. Hinder
19. What is the charge on potassium in the compound KCl?
- A. -1
 - B. +1
 - C. -2
 - D. +2
20. Which of the following are correct units for energy?
- A. Joules

- B. Kg-m/Sec²
 - C. Newton
 - D. Watt
21. What mineral is responsible for muscle contractions?
- A. Chloride
 - B. Sodium
 - C. Calcium
 - D. Magnesium
22. Of all the molecules that are significant to biology, which of the following are considered the most important?
- A. Carbohydrates, lipids, protein, and nucleic acids
 - B. Carbohydrates, lipids, protein, and calcium
 - C. Carbohydrates, lipids, protein, and sulfur
 - D. Carbohydrates, lipids, protein, and iron
23. The reaction $2\text{C}_2\text{H}_6 + 7\text{O}_2 \rightarrow 4\text{CO}_2 + 6\text{H}_2\text{O}$ has a ratio of 2 parts ethane (C_2H_6) and 7 parts oxygen (O_2). How many parts of ethane (C_2H_6) will be needed to react with 21 parts of oxygen (O_2)?
- A. 3 parts of ethane C_2H_6
 - B. 6 parts of ethane C_2H_6
 - C. 9 parts of ethane C_2H_6
 - D. 14 parts of ethane C_2H_6
24. A tissue examined under the microscope exhibits the following characteristics: cells found on internal surface of stomach, no extracellular matrix, cells tall and thin, no blood vessels in the tissue. What type of tissue is this?
- A. Epithelial
 - B. Connective
 - C. Muscle
 - D. Cartilage
 - E. Nervous
25. Which of the following physical quantities are scalars? (Select all that apply.)
- A. Energy
 - B. Time
 - C. Velocity
 - D. Distance