

Online Practice Test

On the PCAT website, you can take a half-length Practice Test to help prepare for the actual test. The Practice Test consists of questions from the content areas for each of the five subtests that are like the items you will find on the PCAT. A nominal fee is charged for the Practice Test that you can pay with a credit card. Visit the PCAT website at www.pcatweb.info.

Sample Test Questions

The following sample questions are similar to those on the PCAT and similar to those on the Practice test at the PCAT website. You will find answers to these sample questions at the bottom of page 27.

Verbal Ability

Directions: Choose the word that **best** completes the analogy in capital letters.

1. PLANE : AIRPORT :: SHIP :
 - A. Pier
 - B. Berth
 - C. Depot
 - D. Station
2. INEPT : SKILL :: FLIMSY :
 - A. Power
 - B. Weight
 - C. Strength
 - D. Thickness

Directions: Choose the word or set of words that makes the **most** sense when inserted into the sentence and that **best** fits the meaning of the sentence as a whole.

3. Many researchers believe that dreamless sleep is largely a period of physical rest, whereas dreaming sleep is a period of mental _____ during which the mind _____ and stores the information acquired during the day.
 - A. relaxation . . . processes
 - B. inactivity . . . categorizes
 - C. fatigue . . . integrates
 - D. restoration . . . sorts
4. The bottom of the epidermis is made up of newly formed growing cells that become flatter and scallier as they move through the middle layers toward the _____ of the skin.
 - A. edge
 - B. surface
 - C. middle
 - D. interior

Chemistry

Directions: Choose the **best** answer to each of the following questions.

1. What volume of carbon dioxide would be produced if 5 liters of propane, C_3H_8 , were burned in air according to the following equation?
$$C_3H_8 + 5O_2 \rightarrow 3CO_2 + 4H_2O$$
 - A. 1 liter
 - B. 3 liters
 - C. 15 liters
 - D. 30 liters
2. The fact that helium gas is monatomic is best explained by the
 - A. vacant 2s and 2p orbitals of the helium atom.
 - B. small diameter of the nucleus of the helium atom.
 - C. presence of a single proton in the nucleus of the helium atom.
 - D. relative magnitudes of attractive and repulsive forces between two helium atoms.
3. The equation
$${}_{19}^{40}K \rightarrow {}_{20}^{40}Ca + {}_{-1}^0e + \nu$$
represents an example of the process called
 - A. alpha decay.
 - B. beta decay.
 - C. positron emission.
 - D. orbital electron capture.
4. Hydrocarbons with two or more double bonds are
 - A. unsaturated.
 - B. saturated.
 - C. cyclic.
 - D. acids.

Quantitative Ability

Directions: Choose the one **best** answer to each of the following questions.

1. As an angle increases from 0° to 90° , what happens to the value of the sine and cosine of the angle?
 - A. Both the sine and cosine decrease.
 - B. Both the sine and cosine increase.
 - C. The sine increases and the cosine decreases.
 - D. The sine decreases and the cosine increases.
2. ABC is a right triangle, in which $\angle A$ equals 30° and AB equals $\sqrt{3}$. What is the length of AC?
 - A. 1
 - B. 2
 - C. $\sqrt{3}$
 - D. $2\sqrt{2}$
3. If $\log x = A$, then $\log x^2 =$
 - A. $2A$
 - B. A^2
 - C. $A + \log 2$
 - D. $2 \log A$
4. If two similar triangles have bases in the ratio of 2:3, what is the ratio of their areas?
 - A. 1:1.67
 - B. 2:3
 - C. 4:6
 - D. 4:9

Reading Comprehension

Directions: Read the following passage and then choose the one best answer to each of the questions following the passage.

Neomycin is a colorless antibiotic produced by certain strains of *Streptomyces fradiae*. The antibiotic is a polybasic, water-soluble substance. The neomycin complex consists of two isomeric substances, now recognized as neomycin B and neomycin C. Commercial neomycin is composed mainly of neomycin B and is usually in the form of a sulfate, a white amorphous powder.

An A fraction was at first also described, but it was later found to be a degradation product. Neomycin is active against a great variety of Gram-positive cocci and rods, Gram-negative rods, and acid-fast bacteria, notably the tuberculosis organism. It is not active against anaerobic bacteria, fungi, most protozoa, rickettsiae, and viruses.

Development of resistance to neomycin is slower than that to streptomycin. For subcutaneous injection of neomycin sulfate in mice, the LD₅₀ or dosage at which 50% of the animals died was 165–250 mg/kg. The LD₅₀ for intraperitoneal administration is about the same. Intravenously, neomycin is about five times as toxic. Orally, the LD₅₀ is greater than 2800 mg/kg.

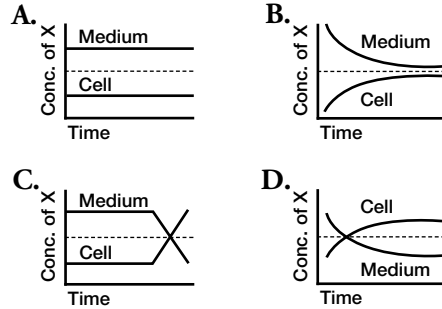
1. If neomycin were bought at a drugstore, it would most probably consist of a sulfate plus
 - A. neomycin A.
 - B. neomycin B.
 - C. neomycin C.
 - D. equal mixtures of neomycin B and C.
2. Neomycin would probably **not** be effective in treating
 - A. athlete's foot.
 - B. tuberculosis.
 - C. infections of the skin caused by rod bacteria.
 - D. infections of the skin caused by Gram-positive cocci.
3. Neomycin is **least** toxic when it is administered by
 - A. mouth.
 - B. intraperitoneal injection.
 - C. injection under the skin.
 - D. injecting it into the veins.

Biology

Directions: Choose the **best** answer to each of the following questions.

- In humans, the removal and storage of excess glucose from the blood is one of the primary functions of the
 - liver.
 - kidneys.
 - pancreas.
 - large intestine.
- In a certain organism, red (R) color is dominant over white (r). In a cross between an RR and an rr individual, what percentage of the offspring will be red?
 - 25%
 - 50%
 - 75%
 - 100%

- Which of the following graphs most accurately shows the relationship between the cell and the surrounding medium during osmosis?



- When viewed under a microscope, what typically causes chromosomes to become more distinct during the prophase stage of mitosis?
 - The chromosomes condense and thicken.
 - The chromosomes lengthen to visible size.
 - The membrane of the nucleus becomes transparent.
 - Some of the genes absorb pigment and become opaque.

Correct Answers

Verbal Ability	Chemistry	Quantitative Ability	Reading Comprehension	Biology
1. A	1. C	1. C	1. B	1. A
2. C	2. D	2. B	2. A	2. D
3. D	3. B	3. A	3. A	3. B
4. B	4. A	4. D		4. A