
Bioskills: Practice Test

1. How many seconds in 2.7 hours?

- a. 9720 s b. 972 s c. 162 s d. 583,200 s

2. What is the *mass* of 1cm^3 of water?

- a. 1 meter b. 1 gram c. 10 grams d. 1 milliliter

3. Bullfrogs have big appetites. An adult bullfrog is 15 inches or _____ centimeters long.
(2.54 cm = 1 inch)

- a. 38.1 inches b. 381 cm c. 5.91 cm d. 38.1 cm

4. Camels can drink 110 quarts of water in ten minutes. How many milliliters is this?

(1 liter = 1.06 quarts)

- a. 103,774 ml b. 103.8 ml c. 101,887 ml d. 1,144,800 ml

5. A hypothesis is most valuable in biology when it can be tested by:

- a. opinions of the majority b. debate among biologists
c. observations & experimentation d. review of available data

6. One billion can be correctly displayed as which of the following?

- a. 10^9 b. 10^3 c. 10^5 d. 10^6

7. Which is the largest among the following?

- a. 100 nanometers b. $1\mu\text{m}$ c. .001cm d. .001 mm

8. Three milliliters of volume is the same as

- a. 3mm^3 b. 3cm^3 c. 3cm^2 d. 3m^3

9. Quantitative observations can be recorded using

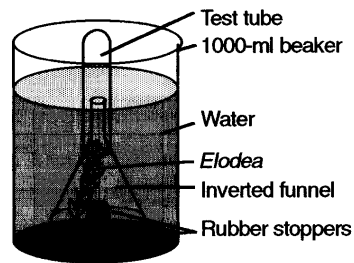
- a. numerical information (numbers) b. a control c. a system d. a picture

10. Which is a conversion factor for the conversion of 6.7 millimeters to micrometers (μm)?

$6.7\text{ mm} \times \boxed{\text{?}} = 6700\ \mu\text{m}$

- a. $1000\text{ mm}/1\mu\text{m}$ b. $1000\mu\text{m}/1\text{mm}$ c. $1\text{mm}/100\ \mu\text{m}$ d. $1\text{ mm}/1000\mu\text{m}$

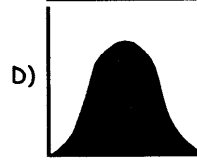
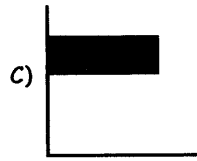
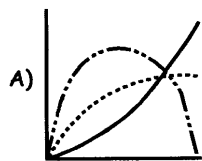
- 15) Two sets of the laboratory equipment shown in the diagram below were set up. One was exposed to light for 24 hours, while the second was kept in the dark for the same time period.



Gas collected in the test tube of the setup that was exposed to light. No gas collected in the test tube of the setup that was kept in the dark. The experiment was repeated 10 times with the same result. At the end of the experiment, a statement was made that all plants produce gas in the presence of light. This statement is known as a

- A) generalization
B) control
C) hypothesis
D) limitation
- 16) In an experiment, the setup that provides a basis of comparison is known as
- A) a control
B) the problem
C) a variable
D) the conclusion
- 17) A student conducted an original, well-designed experiment, carefully following proper scientific procedure. In order for the conclusions to become generally accepted, the experiment must
- A) support the original hypothesis
B) be repeated to verify the reliability of the data
C) be conducted by a scientist
D) contain several experimental variables
- 18) In a controlled experiment, 20 marigold plants of the same age were grown singly in 20 different pots containing soil of the same composition and moisture level. The pots were divided into two groups of 10. One group was exposed to 8 hours of sunlight each day for 15 days, and the other group was exposed to 8 hours of light from a 75-watt bulb for the same time period. In this investigation, the source of light represents the experimental
- A) problem
B) variable
C) control
D) hypothesis

19) Which type of diagram could *best* be based to display data showing the numerical relationship between the components of a substance and the entire substance?



20) Which generalization can be made from the data in the table below?

DATA TABLE

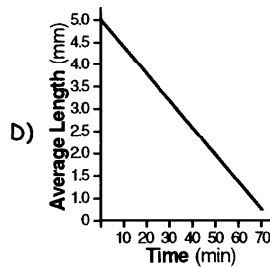
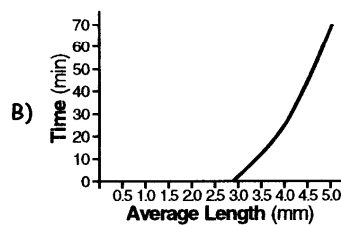
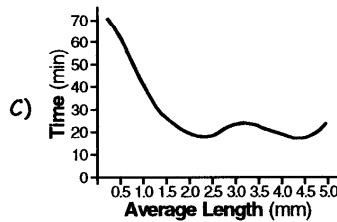
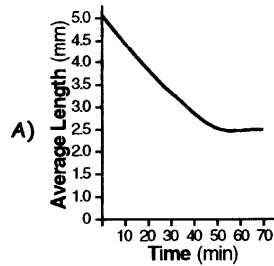
Sex	Height (in)	Weight (lb)
Male	62	125
	61	115
	65	135
	64	130
	66	146
	63	126
Female	64	120
	62	118
	59	108
	63	115
	60	115
	61	110

- A) No relationship exists between height and weight.
- B) As height increases, weight usually increases.
- C) The height of an individual determines his or her weight.
- D) As height increases, weight usually decreases.

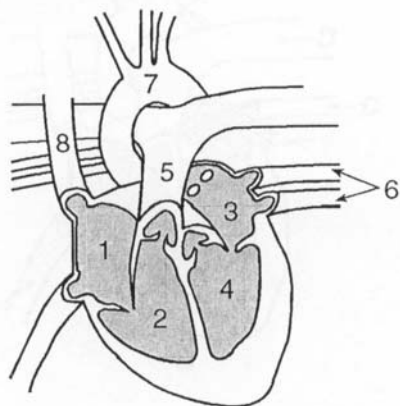
21) A student cut a piece of potato into 8 cubes, each measuring 5 millimeters along each edge, and placed 7 of them in a beaker containing a 25% salt solution. One cube was removed from the beaker every 10 minutes and the average length of two sides was determined. The results are shown in the data table below.

Time (min)	Average Length (mm)
0	5.0
10	4.5
20	4.0
30	3.5
40	3.0
50	2.5
60	2.5
70	2.5

Which line graph most accurately shows the relationship between time in the salt solution and size of the cube?



The diagram below illustrates the human heart.



22. Blood entering at 6 is returning from

- a. the brain
- b. the lungs
- c. all body tissues aside from the brain and lungs
- d. digestive system

23. The thin-walled vessels of the circulatory system where most oxygen and carbon dioxide are exchanged are

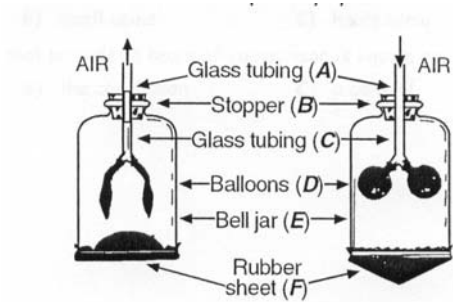
- a. capillaries
- b. veins
- c. arteries
- d. alveoli

24. When heating liquid materials in laboratory glassware, a student should always

- a. record the temperature of the liquid
- b. stopper the test tube
- c. wear safety goggles
- d. use Benedict's solution

Formatted: Bullets and Numbering

The diagrams below represent models of the human respiratory system.



25. The diaphragm is represented by letter

- e. f
- f. d
- g. c
- h. e

Formatted: Bullets and Numbering

26. The lungs are represented by letter

- i. f
- j. d
- k. c
- l. e

Formatted: Bullets and Numbering

Answers

- | | |
|------|-------|
| 1 A | |
| 2 B | |
| 3 D | |
| 4 A | |
| 5 C | |
| 6 A | |
| 7 C | |
| 8 B | |
| 9 A | |
| 10 B | 19 B |
| 11 C | 20 B |
| 12 D | 21 A |
| 13 D | 22 B |
| 14 C | 23 A |
| 15 A | 24 C |
| 16 A | 25 F |
| 17 B | 26. D |
| 18 B | |

