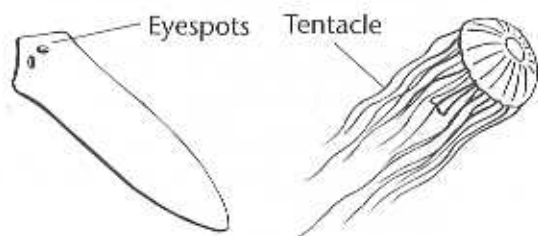


LIFE SCIENCE

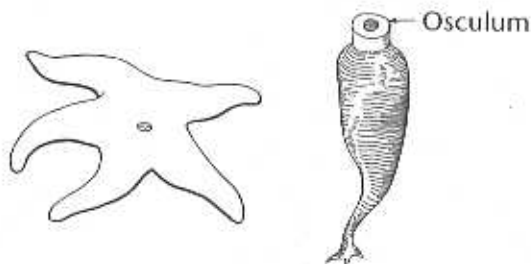
PRACTICE TEST B

1 Which of these organisms stays in one place like a plant, but is an animal because it takes in food?



A

B

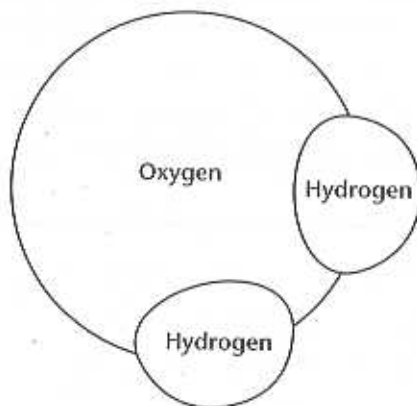


C

D

2 Mushrooms are classified as —

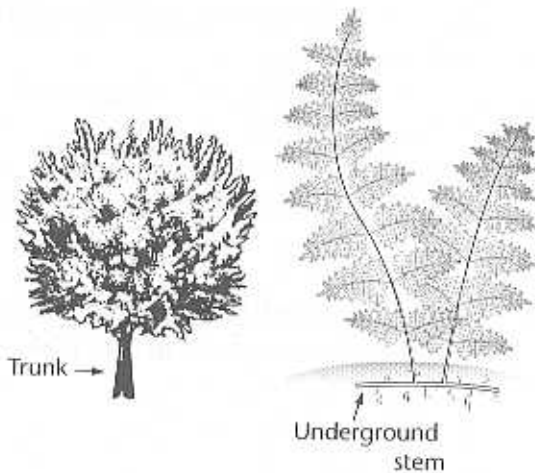
- F fungi
- G proteins
- H plants
- J bacteria



3 The illustration shown represents —

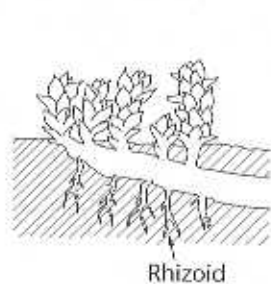
- A a cell
- B an element
- C a molecule
- D an atom

4 Which of the following plants is classified as a moss?

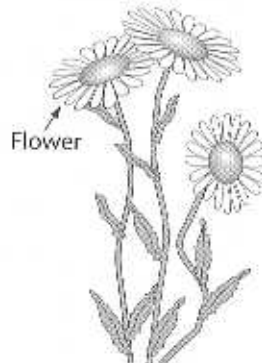


F

G



H



J

PRACTICE TEST B (continued)

Directions: Use the information given below to answer questions 5–6.

Nutrition Facts

Serving Size 1 cup (30 g)
 Servings Per Container About 10

Amount Per Serving
Calories 110 **Calories from Fat** 15

% Daily Value*	
Total Fat 2 g	3%
Saturated Fat 0 g	0%
Cholesterol 0 mg	0%
Sodium 280 mg	12%
Total Carbohydrates 22 g	7%
Dietary Fiber 3 g	12%
Sugars 1 g	
Protein 3 g	
Vitamin A 10%	Vitamin C 20%
Calcium 4%	Iron 45%

* Percent Daily Values are based on a 2,000 Calorie diet. Your daily values may be higher or lower depending on your caloric needs.

5 How much unsaturated fat does each serving of this food contain?

- A 0 g C 2 g
 B 1 g D 3 g

6 What Percent Daily Value of carbohydrates would one serving of this food provide to a person who consumes 2,500 Calories each day?

- F More than 12%
 G Between 7% and 12%
 H 7%
 J Less than 7%

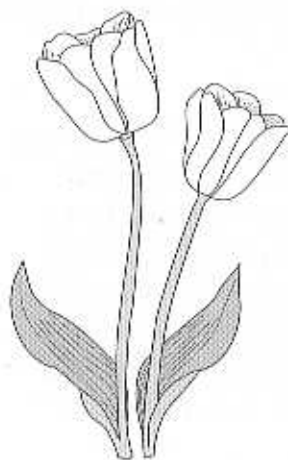
7 A break in a bone is called a —

- A rupture C fracture
 B sprain D dislocation

8 Why did Abert squirrels and Kaibab squirrels of the American southwest evolve different traits?

- F Competition
 G Continental drift
 H Geographic isolation
 J Overproduction

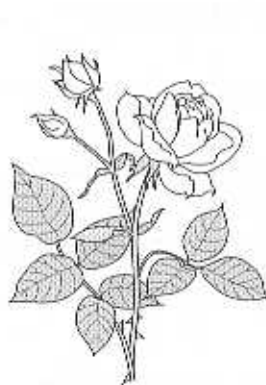
9 Which of these plants is *not* a dicot?



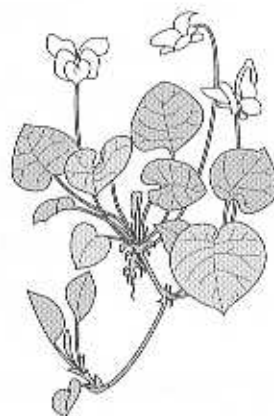
A



B



C



D

PRACTICE TEST B *(continued)***10** Why are viruses considered parasites?

- F They destroy the cells in which they multiply.
- G They are tiny cells found within protists.
- H They are unicellular microorganisms that reproduce quickly.
- J They provide a home for bacteria.

13 Which structures are most closely associated with mollusks?

- A Exoskeleton, jointed appendages, molting
- B Kidneys, gills, radula, mantle
- C Endoskeleton, radial symmetry, water vascular system
- D Gizzard, down feathers, crop, vertebrae

Directions: Use the information given below to answer questions 11–12.

Samantha repeated Redi's experiment for a spontaneous generation project. She placed meat in two identical jars. She covered one jar with plastic wrap. She left the other uncovered. After a few days, Samantha observed young flies (maggots) on the meat in the open jar. There were no flies in the covered jar.

11 What was Samantha trying to discover?

- A Does decaying meat produce maggots?
- B Do maggots prefer one type of meat to another?
- C Does the appearance of maggots depend on temperature?
- D Does plastic wrap prevent meat from spoiling?

12 What conclusion should Samantha have reached?

- F Meat will not decay if it is covered.
- G Decaying meat produces maggots.
- H Decaying meat does not produce maggots.
- J Maggots live in meat and grow as the meat ages.

14 Which endocrine gland provides a link between the nervous system and the endocrine system?

- F Pituitary
- G Adrenal
- H Hypothalamus
- J Parathyroid

15 How can you distinguish a frog from a toad?

- A Frogs form from tadpoles while toads do not.
- B The skin of a frog is smooth and moist, while that of a toad is bumpy and dry.
- C Frogs have skin glands behind their eyes that ooze poison.
- D Frogs are green while toads are gray.

16 Invertebrate carnivores that use stinging cells to capture their prey and defend themselves are classified as —

- F arthropods
- G mollusks
- H echinoderms
- J cnidarians

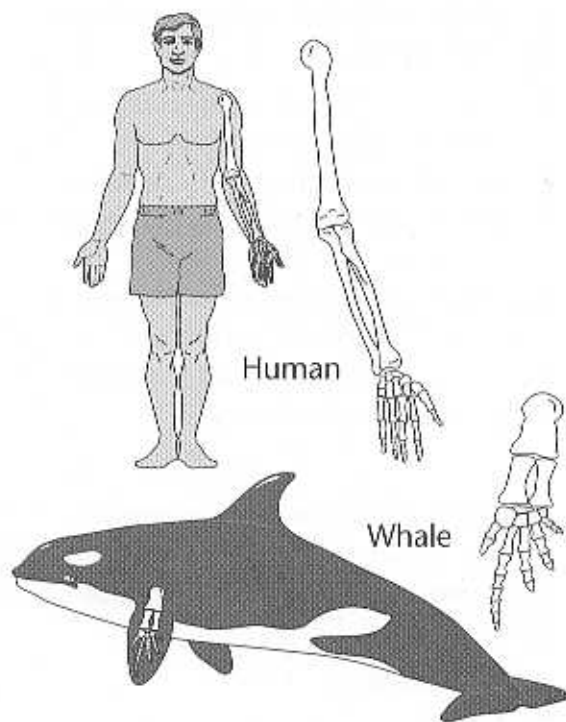
PRACTICE TEST B (continued)

17 The sugar glucose ($C_6H_{12}O_6$) is the major source of energy for your body's cells. Which equation best describes the process of respiration?

- A $C_6H_{12}O_6 + H_2O + \text{energy} \rightarrow CO_2 + O_2$
- B $CO_2 + H_2O + \text{energy} \rightarrow C_6H_{12}O_6 + O_2$
- C $C_6H_{12}O_6 + O_2 \rightarrow CO_2 + H_2O + \text{energy}$
- D $CO_2 + H_2O \rightarrow C_6H_{12}O_6 + O_2 + \text{energy}$

18 What path does air follow before it enters your bloodstream?

- F Pharynx \rightarrow trachea \rightarrow bronchi \rightarrow alveoli
- G Bronchi \rightarrow trachea \rightarrow pharynx \rightarrow alveoli
- H Trachea \rightarrow pharynx \rightarrow bronchi \rightarrow alveoli
- J Alveoli \rightarrow bronchi \rightarrow trachea \rightarrow pharynx



19 Compare the bones in a human arm with those in the flipper of a whale. What is the significance of the bones shown?

- A They are different, which means these species evolved in isolation.
- B They are similar, which means these species have adapted to similar environments.
- C They are homologous, which means they evolved from a common ancestor.
- D They are unrelated, which means these species have nothing in common.

PRACTICE TEST B (continued)

20 Which of the following is *not* an example of homeostasis?

- F As a person's body temperature rises, the person begins to sweat.
- G As a person's muscle cells use more oxygen, the person's breathing rate decreases.
- H As a person's skin cells are shed, more skin cells are produced.
- J As a person's body loses water, the person becomes thirsty.

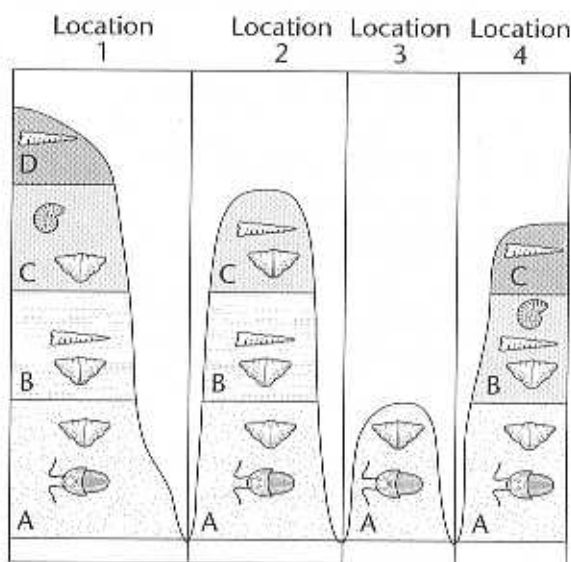
21 Which major organ of the excretory system eliminates urea, excess water, and other waste materials from the body?

- A Gallbladder
- B Kidney
- C Liver
- D Pancreas

22 How are the cells of bacteria different from those of plants and animals?

- F Bacterial cells are much larger than plant and animal cells.
- G Bacterial cells do not contain a nucleus.
- H Only bacterial cells have a cell membrane.
- J Bacterial cells do not contain cytoplasm.

Directions: Use the diagram below to answer questions 23–24.

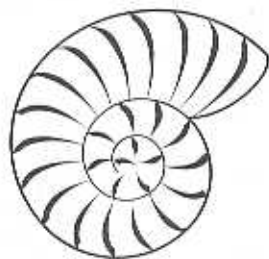


23 Each layer belongs to one time period.

At location 2, index fossils are found —

- A only in layer A
- B only in layer C
- C in layers A and B
- D in layers B and C

24 A geologist collected the following index fossil from layer B at location 4. What can the geologist infer?



- F Layer C at location 1 is older than layer B at location 4.
- G Layer C at location 1 is younger than layer B at location 4.
- H Layer C at location 1 is about the same age as layer B at location 4.
- J The relative age of layer C at location 1 cannot be determined.

PRACTICE TEST B *(continued)*

Directions: Use the information and the chart below to answer questions 25–26.

Blood type is determined by a single gene with three alleles. This chart shows which combinations of alleles result in each blood type. A baby has blood type AB.

Blood Types

Blood Type	Combination of Alleles
A	$I^A I^A$ or $I^A i$
B	$I^B I^B$ or $I^B i$
AB	$I^A I^B$
O	ii

25 What can you infer about the baby's parents?

- A Neither has type AB blood.
- B Both have type AB blood.
- C One has type A blood, and the other has type B blood.
- D Neither has type O blood.

26 Why does the baby have only two alleles if the inheritance of blood type is controlled by three alleles?

- F Each of two chromosomes carries only one allele.
- G Each chromosome can carry only two alleles.
- H She has three alleles, but one is recessive.
- J Each of her parents has only one allele.

27 The part of the human brain that controls balance is the —

- A spinal cord
- B cerebrum
- C brainstem
- D cerebellum

28 What are the four major components of blood?

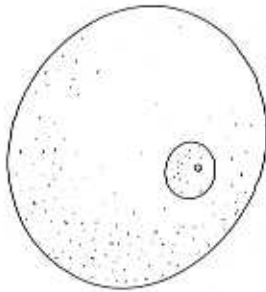
- F Plasma, lymph, white blood cells, platelets
- G Plasma, red blood cells, white blood cells, fibrin
- H Red blood cells, white blood cells, platelets, carbon dioxide
- J Plasma, red blood cells, white blood cells, platelets

29 The scientific name for a house cat is *Felis domesticus*. **Felis** is the name of the —

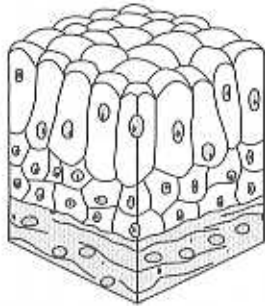
- A family
- B genus
- C species
- D variety

PRACTICE TEST B (continued)

30 Which of these is an example of a human tissue?



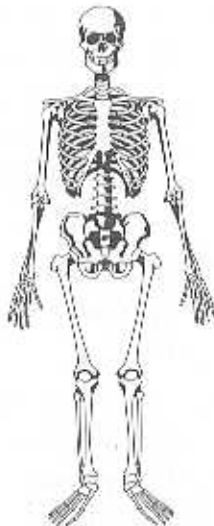
F



G



H



J

31 Which of these actions is a voluntary response?

- A Sneezing
- B Breathing
- C Chewing
- D An increase in heartbeat rate

Directions: The table below shows approximate amounts of gases inhaled and exhaled by humans. Use the table to answer questions 32–33.

Gases in Inhaled and Exhaled Air

Gas	Inhaled Air	Exhaled Air
Nitrogen	78%	78%
Oxygen	21%	16%
Carbon dioxide	0.03%	4%

32 What conclusion can you draw from this data?

- F Inhaled air contains less oxygen and more carbon dioxide than exhaled air.
- G Inhaled air contains more oxygen and less carbon dioxide than exhaled air.
- H Inhaled air contains more oxygen and more carbon dioxide than exhaled air.
- J Inhaled air contains the same amount of nitrogen and carbon dioxide as exhaled air.

33 A person inhales pure oxygen (100 percent oxygen). What percentage of the air exhaled by this person is oxygen?

- A 100%
- B Greater than 16%, but less than 100%
- C 16%
- D Less than 16%

PRACTICE TEST B (continued)

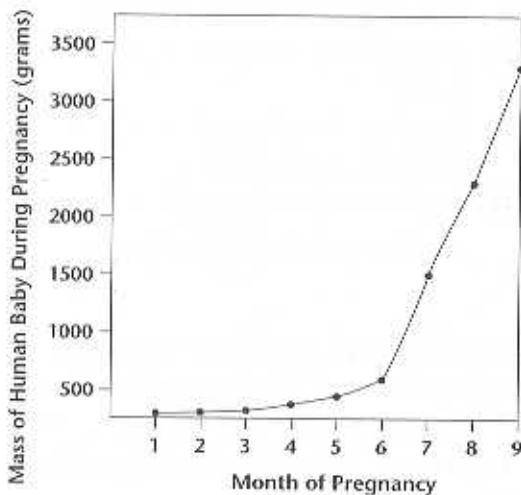
34 What happens to an amphibian during metamorphosis?

- F It changes from its immature stage to an adult.
- G It is carried out to sea.
- H Its eggs are released.
- J It develops gills.



35 What happens during the process of photosynthesis?

- A Cells use energy in sunlight to make food.
- B Cells break down simple food molecules and release the energy they contain.
- C Cells release energy from sugar molecules without using oxygen.
- D Cells grow and divide.



36 The graph above shows that the rate at which a developing baby gains weight —

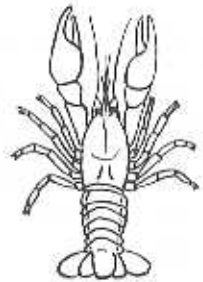
- F remains constant
- G steadily increases
- H increases, then decreases
- J steadily decreases

37 Which of the following organisms is most closely related to those shown above?

Osculum



A



B



C



D

38 The muscle that helps you inhale during respiration is called the —

- F triceps
- G abductor muscle
- H diaphragm
- J bronchial muscle

39 Diffusion, osmosis, and active transport are all —

- A methods by which substances move into and out of a cell
- B means by which cells reproduce
- C processes that speed up chemical reactions in a cell
- D ways that cells convert food to energy

PRACTICE TEST B (continued)

40 Which cell part stores food, waste products, and other materials?

- F Mitochondria
- G Ribosomes
- H Vacuole
- J Endoplasmic reticulum

41 Which is an example of a noninfectious disease?

- A Diabetes
- B Lyme disease
- C Measles
- D Flu

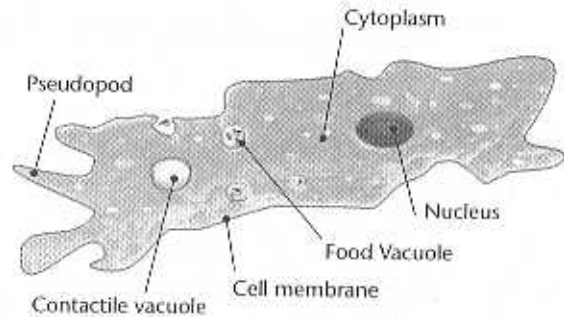
42 A mammal that develops inside its mother's body until its body systems can function independently is a —

- F marsupial
- G monotreme
- H placental mammal
- J gestational mammal

43 A clone is an organism that is —

- A a product of selective breeding
- B genetically identical to the organism from which it was produced
- C a cross between two genetically different individuals
- D produced through the process of genetic engineering

Directions: Use the information below to answer questions 44–46.



44 Which part of the amoeba enables it to move?

- F Pseudopod
- G Nucleus
- H Cell membrane
- J Contractile vacuole

45 How does the food vacuole form?

- A It forms through binary fission.
- B It forms when the cell membrane divides.
- C It forms when cytoplasm flows away from food particles.
- D It forms when the ends of two pseudopods join together.

46 An amoeba is a unicellular organism that lacks a cell wall. It can move from place to place to obtain food by eating other organisms. Scientists classify amoebas as —

- F animals
- G bacteria
- H fungi
- J protists

PRACTICE TEST B (continued)

47 An inflammatory response is the body's response to —

- A swelling and tissue damage caused by exposure to heat
- B high levels of insulin in the blood-stream
- C a high body temperature and fever
- D disease-causing organisms that have begun to damage cells

48 Which of the following is an example of an organic compound?

- F Baking soda H Sugar
- G Salt J Water

49 Which organism has a segmented body and a closed circulatory system?

- A Earthworm C Crayfish
- B Sponge D Spider

50 What happens when your trachea is irritated by foreign particles?

- F You sneeze.
- G You hiccup.
- H You cough.
- J You blink.

51 The correct order of the geologic time scale, from oldest to most recent, is —

- A Cenozoic Era, Mesozoic Era, Paleozoic Era, Precambrian
- B Paleozoic Era, Precambrian, Mesozoic Era, Cenozoic Era
- C Precambrian, Paleozoic Era, Mesozoic Era, Cenozoic Era
- D Mesozoic Era, Cenozoic Era, Paleozoic Era, Precambrian

52 Which of the following is a function of skin?

- F It helps prevent the loss of water.
- G It helps the body absorb oxygen from the air.
- H It provides most of the vitamins and minerals that the body needs.
- J It allows microorganisms to pass freely into the body.

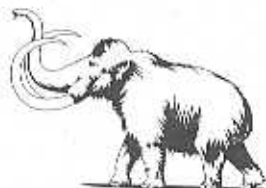
53 Which of the following organisms existed during the Paleozoic Era?



A



B



C



D

PRACTICE TEST B (continued)

Directions: Use the information and the table below to answer questions 54–56.

Alligators are large reptiles with muscular tails, large teeth, and strong jaws. Like nearly all reptiles, alligators hatch from eggs.

The table shows the results of an experiment conducted with alligator eggs. Scientists incubated the eggs of one alligator species at different temperatures. When the eggs hatched, the scientists counted the numbers of males and females born in each group of eggs.

Incubation Temperature	Number of Females	Number of Males
29.4°C	80	0
30.6°C	19	13
31.7°C	13	38
32.8°C	0	106

54 What question were the scientists most likely trying to answer?

- F** Does the body temperature of newborn alligators depend on the incubation temperature?
- G** Do different alligator species hatch at different incubation temperatures?
- H** Do high incubation temperatures prevent alligator eggs from hatching?
- J** Does the incubation temperature of the eggs affect the sex of the alligators?

55 What variable should be constant so that scientists can compare their data at each incubation temperature?

- A** Day of the week
- B** Location of the laboratory
- C** Number of eggs in each group
- D** Color of the eggs

56 What might the scientists conclude from this data?

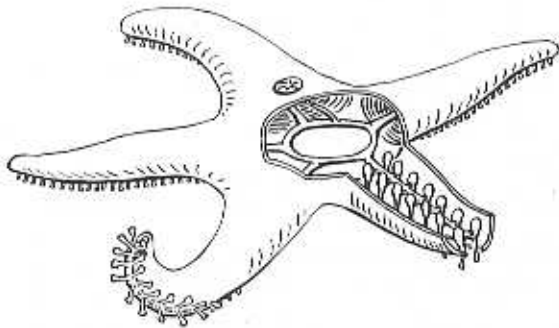
- F** The number of males increases with temperature.
- G** The number of males decreases with temperature.
- H** The number of females increases with temperature.
- J** No females are born at temperatures above 31°C.

57 A human body cell has 46 chromosomes. How many chromosomes will each of its daughter cells have?

- A** 23 ($46 \div 2$)
- B** 46
- C** 92 (46×2)
- D** 184 (46×4)

PRACTICE TEST B (continued)

Directions: Use the diagram below to answer questions 58–60.



- 58** The organism shown is classified as a(n) —
- F** echinoderm
 - G** mollusk
 - H** arthropod
 - J** crustacean
- 59** What kind of symmetry does this organism have?
- A** Bilateral
 - B** Polygonal
 - C** Trilateral
 - D** Radial
- 60** What does this organism use to move about and capture food?
- F** Tentacles with stinging cells
 - G** Water vascular system with tube feet
 - H** Swim bladder and poison spines
 - J** Closed circulatory system and fangs

