

Today you will be taking the SEVENTH grade QUARTER FOUR assessment. This test is designed to test your skills and knowledge in science. It has questions taken from science classes, as well as about experiments. You should make sure to read each question carefully, including the information given at the beginning of each section. Examine the diagrams to help you understand the questions as well. Some questions may refer to diagrams or information from the previous page.

For the multiple choice sections, make sure to place your answers on your Scantron sheet.

Make sure the Scantron has your full name, neatly written.

For the open ended questions, make sure to read all the information, and write your answer clearly in the space provided

1 (C15) A certain organism has many cells, each containing a nucleus. If the organism makes its own food, it would be classified as
A a bacterium
B a fungus
C a plant
D an animal

2 (C21) What are vitamins?
A. Substances that break down food
B. Bacteria that people get when they eat some foods
C. Substances that people make from protein
D. Substances that people need in small amounts in order for their bodies to function normally

3. (C21) Disinfection is a method used to
A. control infectious diseases
B. increase the number of bacteria
C. increase the rate of spoilage
D. spread diseases



4. (C16) Which of these is NOT a function of the blood?

- A. Digesting food
 - B. Protecting against disease
 - C. Carrying waste materials away from the cells
 - D. Carrying oxygen to different parts of the body
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5. (C21) Insecticides are used to control insect populations so that they do not destroy crops. Over time, some insecticides become less effective at killing insects, so new insecticides must be developed. What is the most likely reason insecticides become less effective over time?

- A) Surviving insects have learned to include insecticides as a food source.
 - B) Surviving insects pass their resistance to insecticides to their offspring.
 - C) Insecticides build up in the soil
 - D) Insecticides are concentrated at the bottom of the food chain.
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6. (C21) If your food already has harmful microbes present, which method of food preservation is least effective to prevent food spoilage caused by microbes?

- A) Freezing
 - B) Dehydration
 - C) Irradiation
 - D) Wrapping in paper
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7. (C16) Which represents the correct pathway of the nutrients in an apple once you take a bite?

- A) circulatory system → cell → digestive system
 - B) circulatory system → digestive system → cell
 - C) Cell → digestive system → circulatory system
 - D) digestive system → circulatory system → cell
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8. (C21) A student grew bacterial cells in nutrient broth. Controlling all other conditions, she found that more bacteria grew at pH 7.5 than at pH 7.0 or 6.5. Later she learned that “pickling” is one method used to prevent the growth of bacteria cells that spoil food. Based on the student’s findings, what effect does “pickling” probably have on food items?

- A) It lowers the pH of the food.
- B) It raises the pH of the food.
- C) It causes the food to have more bacteria.
- D) It makes the bacteria cells in the food larger.

9 Students examined the ground under an oak tree and measured the intensity of the light (foot candles) in various plots. They recorded the number of dandelion and pine seedlings in each plot.

Their findings are summarized in the chart below.

Light Intensity in foot candles	Number of pine seedlings	Number of dandelion seedlings
500	0	22
800	0	17
700	3	18
1200	14	19
1500	17	23

9. Which of the following is the most valid conclusion that can be drawn from the data in the chart?

- A. Dandelion seedlings grow better in shaded areas than in sunlight.
 - B. Pine seedlings grow better in sunlight than in shaded areas.
 - C. The light intensity affects the germination of both dandelion and pine seedlings.
 - D. The light intensity doesn't affect the germination of dandelion and pine seedlings.
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10) Which is the best estimate of the amount of blood in a typical human body?

- A) 100 milliliters
- B) 6 liters
- C) 1 quart
- D) 10 cubic meters



62-64 A scientist took a sample of run-off water from a dairy farm and examined it under a microscope. She identified several strains of *E. coli*, including two different strains that are present on the same. The student decided to examine the water sample every day for a week. She added nutrients for the *E. coli* each day and counted the number of each species. Her findings are summarized in the table below.

NUMBER OF *E. Coli* IN SAMPLE

Day	Strain O157	Strain O121
1	50	50
2	60	80
3	100	90
4	150	60
5	160	50
6	160	30
7	160	20

62.(3 pts) Using the axes below, construct a graph showing the number of each strain of *E. coli* the scientist found each day. Be sure to label the axes



