

***Guide***  
***To Taking The Written Test For***

**PUBLIC HEALTH**  
**TECHNICIAN SERIES**



**New York State Department of Civil Service**

**Albany, New York**

**1999**

# INTRODUCTION

The New York State Department of Civil Service has developed this Guide to familiarize you with the Public Health Technician Series written test. It provides a general description of the subject areas to be tested and the different types of questions you will likely see on the test. The Examination Announcement will specify the exact subject areas to be included on the test you will be taking.

The Public Health Technician Series written test has an overall time allowance of 3 hours. The test is divided into three separate subject areas and the questions are designed to evaluate the following abilities:

1. **ARITHMETIC REASONING:** These questions test your ability to solve an arithmetic problem presented in sentence or short paragraph form.
2. **UNDERSTANDING AND INTERPRETING WRITTEN MATERIAL:** These questions test how well you comprehend written material.
3. **PRINCIPLES OF BIOLOGY, CHEMISTRY AND GENERAL SCIENCE:** These questions test for a basic understanding of the physical world around you and the scientific laws that govern it.

These are the only subject areas that will be included on the written test.

The remainder of this guide explains how you are tested in each of these subject areas. A **TEST TASK** is provided for each subject. This is an explanation of how a question is presented and how to correctly answer it. Be sure to read each one carefully.

You will also be given at least one **SAMPLE QUESTION** for each subject area. It will be of the type that you will see on the actual test. The **SOLUTION** and correct answer are provided after each question. You should study the question and its solution until you understand how it works.

## SUBJECT AREA 1

**ARITHMETIC REASONING:** These questions test your ability to solve an arithmetic problem presented in sentence or short paragraph form.

**TEST TASK:** You are given questions that contain an arithmetic problem presented in sentence or short paragraph form. You must read the problem, understand the situation presented, decide what must be done to solve it, and apply the appropriate arithmetic operation(s) in the appropriate order to determine the correct answer. Knowledge of addition, subtraction, multiplication, and division will be necessary. Questions may also involve the use of percents, decimals, and fractions.

### SAMPLE QUESTIONS:

#### QUESTION 1

3,000 clients visited a health facility during the week ending June 10. During the following three weeks the number of clients increased each week by 10% over the previous week's count. How many clients visited the facility during the week ending July 1?

- A. 3,300
- B. 3,630
- C. 3,900
- D. 3,993

*The answer is D.*

**SOLUTION:** To solve this question, you must first determine the number of weeks from June 10 to July 1. July 1 is three weeks from June 10. Each week, the number of clients increased by 10% over the prior week's amount. Therefore, each week, you must take the prior week's count and add 10% to it. This process must be repeated three times. The following represents the solution:

*During the week ending June 10, 3,000 clients visited the health facility.*

*One week later ends on June 17. During this week, the number of clients increased by 10% over the previous week's count. You take the prior week's total of 3,000 clients and add 300 more clients to the count ( $3,000 \times .10$ ). This gives us a total of 3,300 clients who visited the facility during the week ending June 17.*

*The second week ends on June 24. During this week, the number of clients again increased by 10% over the previous week's count. You take the prior week's total of 3,300 clients and add 330 more clients to the count ( $3,300 \times .10$ ). This gives us a total of 3,630 clients who visited the facility during the week ending June 24.*

*The third and final week ends on July 1. During this week, the number of clients again increased by 10% over the previous week's count. You take the prior week's total of 3,630 clients and add 363 more clients to the count ( $3,630 \times .10$ ). This gives us a total of 3,993 clients who visited the facility during the week ending July 1.*

#### QUESTION 2

An office received 2,400 license applications during the month of April, 1/5 of which were for insurance licenses. If 1/8 of the applications for insurance licenses were rejected, how many applications for insurance licenses were ACCEPTED?

- A. 60
- B. 180
- C. 420
- D. 780

*The answer is C.*

**SOLUTION:** To solve this question, you must first determine the number of applications for INSURANCE licenses. In this case, 1/5 of ALL applications were for insurance licenses, so there were 480 insurance license applications ( $1/5 \times 2400 = 480$ ). Of the 480 insurance license applications, 1/8 of these were rejected. To determine the number of rejected insurance license applications, you multiply  $480 \times 1/8$ . The result is 60. To find the number of insurance license applications that were ACCEPTED, you subtract the number of rejected insurance license applications, 60, from the total number of insurance license applications, 480. The result, 420, is the number of insurance license applications that were ACCEPTED.

*The correct answer is C.*

*The correct answer is D.*

|

## SUBJECT AREA 2

**UNDERSTANDING AND INTERPRETING WRITTEN MATERIAL:** These questions test how well you comprehend written material.

**TEST TASK:** You will be provided with brief reading selections and will be asked questions about the selections. All the information required to answer the questions will be presented in the selections; you will not be required to have any special knowledge relating to the subject areas of the selections.

There are four possible answers given for each selection: A, B, C, D. One is correct and three are incorrect. The following are some of the kinds of errors made in the incorrect choices: a contradiction of a fact or opinion stated in the passage; something that is generally true about the subject but is not discussed in the paragraph; an exaggeration of a point made in the paragraph; an incorrect conclusion.

**SAMPLE QUESTION:**

"Increasingly, behavior termed 'road rage' is being viewed as a public health issue, because of the number of deaths and injuries related to it. Such behavior is often a reaction to feeling one has been treated unfairly by another driver, and is much less likely to occur if a driver is treated fairly. 'Fair play' on the road includes the observance not only of traffic regulations but also of the rules of courtesy. Courteous driving is based on common sense consideration for other drivers and a strong desire to make the roads safe for everyone. Good highway manners should become just as much a matter of habit as other kinds of manners."

Which one of the following statements is best supported by the above selection?

- A. Being courteous when driving is more important than observing traffic regulations.
- B. Courteous driving contributes to road safety.
- C. Those who are generally polite are also courteous drivers.
- D. Unlike driving courtesy, the observance of traffic regulations is a matter of habit.

*The answer is B.*

**SOLUTION:** *Part of what this selection discussed is what it means to be a courteous driver and why it is important to be a courteous driver. The passage says that observing traffic regulations alone is insufficient to promote safety, but being courteous is important as well. This point is made by the use of "not only ... but also ..." Choice A is incorrect because it says that being courteous is more important. The correct answer, Choice B, is based on the chain of ideas that courteous driving is "fair play," fair play reduces road rage, and reduced road rage increases safety. Choice C may be true, but there is nothing in the passage about courteous driving being connected to general politeness. Therefore, Choice C is incorrect. Choice D contrasts the observance of traffic regulations with driving courtesy, saying that the observance of traffic regulations is a matter of habit, something which is not discussed in the paragraph. Choice D is incorrect.*

## SUBJECT AREA 3

**PRINCIPLES OF BIOLOGY, CHEMISTRY AND GENERAL SCIENCE:** These questions are designed to test for a basic understanding of the physical world around you and the scientific laws that govern it.

**TEST TASK:** You are given questions concerning basic principles of biology, chemistry and general science. The questions are appropriate for those who have had the required science courses. These questions may include such areas as elementary principles of physics; microscopic organisms; various systems of the body; scientific terminology and units of measure; and basic chemistry.

### **SAMPLE QUESTIONS:**

**QUESTION 1** Which one of the following is a basic unit of mass in the metric system?

- A. dram
- B. grain
- C. kilogram
- D. pound

*The answer is C.*

**SOLUTION:** To solve this question you must know that the basic unit of mass in the metric system is the kilogram. The other three choices are not units of mass in the metric system. A dram is a unit of weight in the English system and represents a fraction of an ounce. A grain is the smallest unit of mass in the apothecary, avoirdupois, Tower, and Troy systems. A pound is the basic unit of mass in the English system. The correct answer is C.

---

**QUESTION 2** Which one of the following is the electrical unit of resistance?

- A. ohm
- B. volt
- C. ampere
- D. watt

*The answer is A.*

**SOLUTION:** To solve this question, you must know that the ohm is the electrical unit of resistance. The volt is the electrical unit of force, the ampere is the unit for measuring the strength of an electric current, and the watt is the electrical unit of power. The correct answer is A.

---

**QUESTION 3** Of the following, which is the smallest?

- A. a proton
- B. a neutron
- C. an atom
- D. an electron

*The answer is D.*

**SOLUTION:** To solve this question, you must know that atoms consist of electrons around a positively charged nucleus consisting of neutrons and protons. Hence, atoms are not the smallest of the choices listed. Further, you must know that neutrons and protons are of approximately equal mass and that a proton has a mass approximately 1836 times that of an electron. The correct answer is D.

## CONCLUSION

You and your feelings about tests have a great deal to do with how you perform on a test. Some people get so tense and nervous that they don't do as well as they could. They forget things they know or make simple mistakes. The following suggestions should help you overcome these problems.

- Study and review this Guide to become familiar with the test contents.
- Give yourself plenty of time to do what you need to do before the test starts. Arrive at the test room a little ahead of the starting time.
- Try to relax just before the test starts.
- Listen carefully to the instructions the Monitors give you. Carefully read all instructions on the Candidate Directions you are given at the test as well as information on the covers of the test booklets.
- Try to keep calm, cool and collected throughout the test.
- Keep track of time.