STUDY GUIDE
LABORATORY ASSISTANT KNOWLEDGE TEST

TEST #2712

INTRODUCTION

The purpose of this study guide is to assist test takers in preparation for the Laboratory Assistant Job Knowledge Test. This guide contains strategies to use for taking these tests and a study outline, which includes knowledge categories, major job activities, and study references. The 2712 Laboratory Assistant knowledge test is a computerized, job knowledge test designed to cover the major knowledge areas necessary to perform the job of a Laboratory Assistant.

TEST SESSION

It is important that you follow the directions of the Test Administrator exactly. If you have any questions about the testing session, be sure to ask the Test Administrator before the testing begins. During testing, you may NOT leave the room, talk, smoke, eat, or drink. Since some tests take several hours, you should consider these factors before the test begins.

All cellular/mobile phones, pagers or other electronic equipment will NOT be allowed in the testing area.

All questions on this test are multiple-choice. Multiple choice questions have four possible answers. All knowledge tests will be taken on the computer.

The test has a three-hour time limit.

You will receive a Test Comment form so that you can make comments about the test. Write your comments on the form when you have completed the test battery.

TEST MATERIALS

You will be provided with all of the materials necessary to complete the knowledge test. A periodic table will be provided as well as a scientific calculator for you to use during the test.

You will NOT be able to bring or use your own calculator during testing.

STUDY GUIDE FEEDBACK

At the end of this Guide you have been provided with a Study Guide Feedback page. If a procedure or policy has changed, making any part of this Guide incorrect, your feedback would be appreciated so that corrections can be made.

TEST TAKING STRATEGIES

INTRODUCTION

The 2712 Laboratory Assistant knowledge test contains multiple-choice questions. The purpose of this section is to help you to identify some special features of a multiple-choice test and to suggest techniques for you to use when taking one.

Your emotional and physical state during the test may determine whether you are prepared to do your best. The following list provides common sense techniques you can use before the test begins.

CONFIDENCE

If you feel confident about passing the test, you may lose some of your anxiety. Think of the test as a way of demonstrating how much you know, the skills you can apply, the problems you can solve, and your good judgment capabilities.

PUNCTUALITY

Arrive early enough to feel relaxed and comfortable before the test begins.

CONCENTRATION

Try to block out all distractions and concentrate only on the test. You will not only finish faster but you will reduce your chances of making careless mistakes. If possible, select a seat away from others who might be distracting. If lighting in the room is poor, sit under a light fixture. If the test room becomes noisy or there are other distractions or irregularities, mention them to the Test Administrator immediately.

BUDGET YOUR TIMES

Pace yourself carefully to ensure that you will have enough time to complete all items and review your answers.

READ CRITICALLY

Read all directions and questions carefully. Even though the first or second answer choice looks good, be sure to read all the choices before selecting your answer.

MAKE EDUCATED GUESSES

Make an educated guess if you do not know the answer or if you are unsure of it.

CHANGING ANSWERS

If you need to change an answer when testing on a computer, be sure that the new answer is selected instead of the old one.

RETURN TO DIFFICULT QUESTIONS

If particular questions seem difficult to understand, make a note of them, continue with the test, and return to them later.

DOUBLE CHECK MATH CALCULATIONS

Use scratch paper to double check your mathematical calculations.

REVIEW

If time permits, review your answers. Do the questions you skipped previously. When testing on a computer, make sure each multiple choice question has a dot next to the correct answer.

Remember the techniques described in this section are only suggestions. You should follow the test taking methods that work best for you.

JOB KNOWLEDGE CATEGORIES AND STUDY REFERENCES

Below are the major job knowledge areas (topics) covered on the 2712 Laboratory Assistant knowledge test. Listed next to each knowledge category is the number of items on the exam that will measure that topic. You can use this information to guide your studying. Some exams also contain additional pretest items. Pretest items will appear just like all of the other items on your exam, but they will not affect your score. They are an essential part of ensuring the 2712 Laboratory Assistant knowledge test remains relevant to successful performance of the job.

There are 30 items on the **2712 Laboratory Assistant** knowledge test and the passing score is 70%.

ELEMENTARY INORGANIC CHEMISTRY (13 ITEMS)
Knowledge of elementary inorganic chemistry including properties and structure of matter, solubility, and ionization concepts.

References

Schaum's Outline of Beginning Chemistry, 2nd edition, David E. Goldberg, McGraw-Hill, 1999.

INTERMEDIATE INORGANIC CHEMISTRY (10 ITEMS)
Knowledge of intermediate inorganic chemistry including equivalent weight and equilibrium concepts and calculations, balancing equations, calculating molecular and formula weights, volume-normality problems, chemical equilibrium calculations, and oxidation reduction potential.

References

Schaum's Outline of College Chemistry, 8th edition, Jerome R. Rosenberg and Lawrence M. Epstein, McGraw-Hill, 1996 (Chapters 1-4, 8, 9, 11-13, and 16-18)

- These texts are available in university, college and technical bookstores. They might also be purchased from places such as B. Dalton, Barnes and Noble, Borders, Waldenbooks, and Amazon.com.
- Although Schaum's contains some discussion of concepts and theory, the texts are mainly concerned with problem solving. Detailed, worked-out sample problems and additional practice problems with answers are a major part of the texts.
- An applicant wishing a more thorough explanation of the theory and principles of chemistry should consult any general college chemistry text and supplementing the Schaums Outline of College Chemistry, 8th edition.

SAFETY KNOWLEDGE (7 ITEMS)

Includes knowledge of safety hazards encountered in the field such as spills, leaks, and chemical leaks and the procedures used to report hazards encountered, as well as knowledge of Cal/OSHA safety regulations related to personal protective equipment (PPE) and the operation and use of safety devices such as emergency showers, fire extinguishers, eye wash station, and proper lab attire.

References

Hazardous Waste Operations and Emergency Response (HAZWOPER)
California Code of Regulations, Title 8, Section 5192.
Available at: https://www.dir.ca.gov/title8/5192.html

Injury and Illness Prevention Program (IIPP)
California Code of Regulations, Title 8, Section 3203.
Available at: https://www.dir.ca.gov/title8/3203.html

Personal Protective Devices (Body Protection)
California Code of Regulations, Title 8, Section 3383.
Available at: https://www.dir.ca.gov/title8/3383.html

Occupational Exposure to Hazardous Chemicals in Laboratories (Laboratory Standard)
California Code of Regulations, Title 8, Section 5191.
Available at: https://www.dir.ca.gov/title8/5191.html

Emergency Eyewash and Shower Equipment
California Code of Regulations, Title 8, Section 5162.
Available at: https://www.dir.ca.gov/title8/5162.html

Portable Fire Extinguishers
California Code of Regulations, Title 8, Section 6151.
Available at: https://www.dir.ca.gov/title8/6151.html

SAMPLE QUESTIONS

The following sample questions should give you some idea of the form the test will take.

1. Equal sharing of electrons between two atoms produces a(n) _____ bond.
   a. ionic
   b. covalent
   c. polar covalent
   d. equivalent

2. In cold solution, chloride precipitates lead (II) according to the reaction:
   $Pb^{+2} + 2 + 2C1^{-} \rightarrow PbC1_{2(s)}$.

   How many grams of lead chloride form when 20.0 mL of 0.200 M lead nitrate (Pb(NO3)2) solution is mixed with 35.0 mL of 0.150 M sodium chloride (NaC1) solution?

   a. 0.730 g
   b. 1.113 g
   c. 1.461 g
   d. 2.2921 g

3. What is the concentration of sodium in mg/L in a solution containing 1.25 g of sodium sulfate and 0.650 g of sodium chloride in a total volume of 500 mL?
   a. 456 mg/L
   b. 916 mg/L
   c. 994 mg/L
   d. 1321 mg/L

4. In a 0.0100 M solution a certain weak base is 1.4% ionized. What is the pH of the solution at 25 degrees C?
   a. 10.00
   b. 10.15
   c. 12.00
   d. 12.15

5. Given the following reactions and equilibrium constraints:

   $HF \rightleftharpoons H^{+} + F^{-}$ $\quad K = 6.3 \times 10^{-4}$

   $H_2O \rightleftharpoons H^{+} + OH^{-}$ $\quad K = 1.0 \times 10^{-14}$

   What is the equilibrium constant for the reaction:

   $F^{-} + H_2O \rightleftharpoons HF + OH^{-}$?

   a. 1.6×10^{-11}
   b. 6.3×10^{-18}
   c. 6.3×10^{16}

d. 1.6×10^{17}

Sample Question Answers

1. B
2. A
3. D
4. B
5. A

STUDY GUIDE FEEDBACK

Please email Southern California Edison's Corporate Testing to notify us of any changes in policies, procedures, or materials affecting this guide.

EdisonTesting@sce.com

TEST NAME: 2712 Laboratory Assistant Test

COMMENTS