



STUDY GUIDE FOR THE ENTRY LEVEL ABILITIES AND BEHAVIORS EXAM AND STRUCTURED ORAL INTERVIEW PROCESS

AUSTIN FIRE DEPARTMENT

FIREFIGHTER SELECTION PROCESS 2024

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INTRODUCTION

This study guide has been developed to help prepare you for the upcoming Austin Fire Department Entry-Level Firefighter assessment process. This year, the Entry Level Abilities and Behaviors written exam and the Structured Oral Interview process will be administered on the same day. This study guide should serve as an informational guide and provide you with some of the specifics for each testing component as well as a general schedule that you can expect on the test day.

TEST DAY LOGISTICS

You have been assigned a specific date and time for the testing process. You should be prepared to arrive early and allow ample time to park and walk from the parking lot to the registration line. Those who are not in line at the appointed time will NOT be allowed to register.

Do not bring cell phones, cameras, pagers, or other electronic devices (i.e., smart watches, I-pads, etc.) to the test site. These devices will not be allowed in the testing area. You will need a valid photo ID to check in.

During the registration process, you will receive two wrist bands. After you register, you will be escorted into the testing room and assigned a seat. Once all candidates have registered, the Entry Level Abilities and Behaviors Exam will begin. This exam includes a pretest study period (explanation in a following section) and the actual exam. Once the test time elapses or if you complete the exam before the time elapses, you will be escorted to a scanner where you will hand in your answer sheet and receive a candidate number for the Structured Oral Interview Process. You will then be escorted into a holding room to watch a short video and wait to be escorted to the actual Structured Oral Interview administration. Because of the large number of

candidates testing, restroom lines could be very long. No one will be allowed to go to the restroom when test instructions are being read, and there will be strict procedures to follow regarding the use of the restroom during test times. **BE PREPARED TO STAY THE ENTIRE DAY. FOR SECURITY REASONS, YOU WILL NOT HAVE ACCESS TO YOUR CELL PHONE FOR THE ENTIRE TIME YOU ARE IN THE TESTING AREAS (INCLUDING THE HOLDING ROOM).**

GENERAL WRITTEN EXAM INFORMATION

This written exam is designed to measure work behaviors, skills, and abilities important to becoming a firefighter. Although some questions are placed in a firefighting context, this exam does not require candidates to have previous firefighting knowledge or experience.

The following sections will discuss general examination information, the exam components in detail, and the types of questions included in each component.

WRITTEN EXAM COMPONENTS

The **Entry Level Abilities and Behaviors Exam** includes a Pretest Study Booklet, Answer Sheet, and Entry Level Abilities and Behaviors Exam Booklet. The following abilities are assessed by this exam:

1. **Memory for Ideas:** Recalling the essence of previously studied material (e.g., the main point or topic of a paragraph). Rote recall of this material (e.g., specific words or sentences) is not required. Responses may be either written or oral.
2. **Associative Memory:** Recalling or reproducing items of information arbitrarily paired. Item groupings have no obvious relationship between them of a pair and no logical way of getting from item to the other except by memorization. Firefighters use associative memory to learn signal codes, the interpretation of fire conditions (fumes, color of smoke), the numeric identifiers of hazardous material classes (#8 is Corrosive).

3. **Mathematical computation:** Ability to add, subtract, multiply, or divide quickly and correctly.
4. **Mathematical Reasoning:** Ability to apply math to solving test questions involving charts and tables.
5. **Mechanical Reasoning:** Mechanical reasoning, also known as mechanical aptitude, is measured by the degree of familiarity with everyday physical objects, tools, and devices, especially their function, use, size, shape, weight, and appearance. Firefighters need to understand how certain tools and pieces of equipment work. They must be able to operate pumps and other complicated equipment and position ladders safely.
6. **Reading Comprehension (Written Comprehension):** Ability to read and understand information and ideas presented (in English) in work related documents and other written materials.
7. **Flexibility of Closure:** The ability to identify or detect a known pattern (a figure, object, word, or sound) that is hidden in other distracting material.
8. **Spatial Orientation:** Ability to know your location in relation to the environment or to know where other objects are in relation to you. Firefighters need to know the relative position of their body parts or their location in a building when visibility is limited because of smoke.
9. **Risk Assessment (Spatial Scanning):** Necessitates rapid visual exploration of a wide or complicated spatial field to foresee consequences for each step taken. May be considered visual planning. Selecting the one best series of steps from all possible steps

The behavioral portion of this exam includes behavioral questions that assess attributes such as Work Ethic, Accountability, and Teamwork.

Specific examples of the types of questions will be explained starting on page 6.

Order of Events for the Entry Level Abilities and Behaviors Exam

1. Completion of the Answer Sheet – The administrator will guide you in completing your answer sheet before the Pretest Study Period to ensure a smooth transition into the exam.
2. Pretest Study Period – You will be given the Pre-Test Study booklet to read, study, and memorize material associated with the exam. You will be allowed a designated period of time (announced on test day) to study and memorize the material presented in the Pretest Study booklet. You **MAY** write in this booklet.

However, you must turn in the booklet at the end of the pretest study period. The material that must be learned and committed to memory typically contains written procedures, diagrams, and pictures. After the study period has ended, the Pretest Study booklet is collected, and the Entry Level Abilities and Behaviors Exam booklets are passed out.

3. Entry Level Abilities and Behaviors Exam – You will be allowed a designated period of time to complete this exam (announced on test day). This exam includes both cognitive and behavioral questions. You **MAY** write in this test booklet.

ANSWER SHEET BASICS

You will be provided with an answer sheet for the exam. All of the questions from each test are multiple choice format. You will be required to darken in the answer for each question.

Questions in Test Booklet

1. A major responsibility of firefighters is to:
 - a. give speeches.
 - b. repair water leakages.
 - c. direct traffic.
 - d. fight fires.

Items on Answer Sheet

1. Ⓐ Ⓑ Ⓒ ● Ⓔ Ⓕ Ⓖ Ⓗ

Answer "d" is the best answer and bubble "d" has been darkened to show this.

When completing your answer sheet:

- FILL IN THE BUBBLE COMPLETELY. THE COMPUTER MAY NOT SCORE YOUR ANSWER CORRECTLY IF THE BUBBLE IS PARTIALLY FILLED.
- IF YOU ERASE AN ANSWER, BE SURE TO ERASE IT COMPLETELY.
- USE A #2 PENCIL ONLY.
- WHEN MARKING AN ANSWER ON THE ANSWER SHEET, BE SURE THE ROW OF ANSWER BUBBLES IS NUMBERED THE SAME AS THE NUMBER OF THE QUESTION ON WHICH YOU ARE WORKING.
- DARKEN ONLY ONE (1) BUBBLE FOR EACH QUESTION. IF YOU DARKEN MORE THAN ONE (1) BUBBLE PER QUESTION, YOU WILL RECEIVE NO CREDIT FOR THAT QUESTION.

TYPES OF WRITTEN EXAM QUESTIONS

The questions included in the written exam are designed to measure your basic cognitive abilities and behavioral (non-cognitive) attributes. In this section, we will list the type of questions and present sample questions to familiarize you with the different question formats. The asterisk (*) indicates the correct answer for all sample questions.

Memorization (Memory for Ideas and Associative Memory)

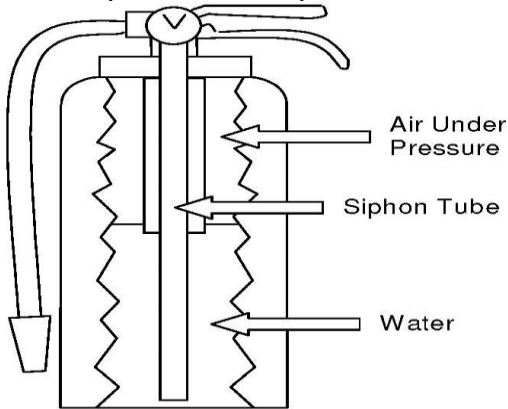
The Pretest Study Booklet includes written information, pictures, and diagrams that you will need to memorize to later answer questions in the Entry Level Abilities and Behaviors Exam Booklet. Being able to remember details of what is seen, heard, and read has always been a characteristic of a good firefighter. A firefighter must be able to remember the proper arrangement of equipment, routes in their assigned areas, and departmental procedures to prevent mishandling important duties for emergencies.

The Memorization information in the Entry Level Abilities and Behaviors Exam Booklet will be the first material from which you are tested for this exam. It is recommended that while memorizing the information in the Pretest Study Booklet, you use a method or plan and stay focused and attentive to the material. It may also be helpful to practice memorizing other material before the test.

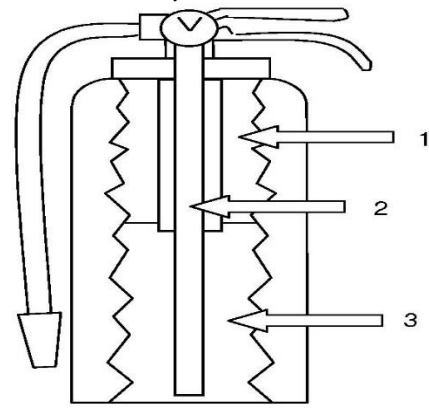
Example Questions

Diagram I—Stored Pressure Water Extinguisher

Part 1 (from Pretest)



Part 2 (from Test Booklet)



Which of the following does the number 3 represent?

- * a. water
- b. air
- c. air under pressure
- d. siphon tube

Hypothetical Fire Scene Passage from the Pretest Study Booklet

On August 22, 2023, at 3:50 p.m., a fire was reported at a senior living facility at 22 Cherry Road. Dispatch initially called out a regular alarm that consisted of two engines, one truck, and a battalion chief. Once firefighters arrived on scene at the 3-story apartment complex, Battalion Chief Carla Banks called for additional resources, and a second alarm was dispatched.

The fire originated in a center apartment on the 2nd floor. There is heavy smoke in the hallway, and fire is visible from second floor windows. All residents of the apartment complex have been safely evacuated with only minor injuries reported.

What was the name of the Battalion Chief who responded to the fire and called for additional resources?

- a. Carl Hanks
- b. Carlie Hanks
- * c. Carla Banks
- d. Charlie Banks

Reading Passages

A portion of the Entry Level Abilities and Behaviors Exam include written passages sometimes placed in fire suppression context and questions that follow the passage. The intent is for you to demonstrate how well you understand what you read. Reading comprehension, or understanding what you read, is very important to your success both on the test and on the job. A firefighter at any level will have to read and interpret volumes of information. How well you use this ability will directly relate to how well you do your job.

Example Passage and Questions

Passage

Oftentimes, when one thinks of a firefighter, they immediately visualize a dog in their midst, specifically a Dalmatian. This is appropriate and with good reason. Although they are not as important today, in ages past, when fire trucks were pulled by horse drawn carriages, the Dalmatians' skills were very important. In order to help the fire department run at full strength, dogs were trained and used to help guide and direct the horses where to go when en route to a fire scene. Because of their friendly behavior, ease of being trained, and ability to look after themselves, Dalmatians became the dog of choice. Since fire trucks are now powered by gasoline, the dogs are no longer needed. However, for the sake of tradition, some can still be found in many fire houses across the country.

Answer the below questions based on the Passage above.

- According to the passage, dogs were often used to:
- a. provide firefighters with companionship.
 - b. protect the fire house.
 - * c. guide and direct horses.
 - d. assist in rescues.

- Which one of the following would be the most accurate title for the passage?
- a. Man's Best Friend
 - b. Traditions
 - * c. The Firehouse Dog
 - d. Training a Dalmatian

Mathematical Computation and Reasoning

These types of questions involve mathematical reasoning to understand a word problem and to figure out what information the word problem is attempting to elicit. After identifying data necessary to solve the problem, you must be able to manipulate the numbers to generate a correct response.

A calculator is not provided for your use during this portion of the exam. Therefore, you should practice developing these skills without the use of a calculator. The mathematical operations that are generally tested in this section of the exam usually involve addition, subtraction, multiplication, division, percentages, decimals, fractions, and simple algebra. Sometimes the exam presents a table of data, and the test taker must perform mathematical computations on the data presented in the table.

Math is of extreme importance to firefighters because it helps them figure out necessary formulas, such as what size nozzle tip and what length of hose to use to fight a fire. Firefighters must also use formulas to compute various numbers such as the pounds per square inch of pressure needed to pump enough water onto a fire to extinguish it.

Example Questions

1. Assume that, for safety, the base of a ladder must be placed at a distance equal to 25% of its length away from the base of a building. If the ladder is 20 feet tall, how far away from the base of the building should the ladder be placed?
 - a. 2 feet
 - * b. 5 feet
 - c. 10 feet
 - d. 14 feet

2. Friction loss is the reduction of water pressure which occurs as water travels over distance and through any kind of restriction. Following is the formula for friction loss (FL) in a 2 ½ inch fire hose:

$$FL = 2Q^2 + Q \quad \text{where: } Q = \text{GPM}/100$$

Based on the information given above, what is the friction loss of a 2 ½ inch hose when the gallons per minute (GPM) is 185?

- * a. 8.7
b. 15.5
c. 9.3
d. 10.2

DEATHS ATTRIBUTED TO HOUSE FIRES

	District 1	District 2	District 3	District 4	District 5
2004	14	21	27	12	17
2003	17	24	33	17	16

In 2003 which of the following best describes the relative number of deaths attributed to house fires of District 2 compared to District 3?

- * a. District 3 had 27% more deaths than District 2.
b. District 3 had 72% less deaths than District 2.
c. District 2 had 20% more deaths than District 3.
d. District 2 had 72% less deaths than District 3.

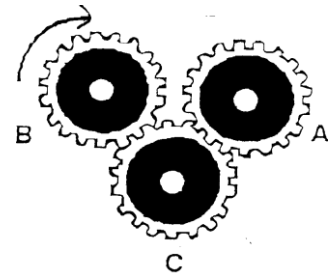
Mechanical Reasoning

On this exam, you will be asked questions that deal with basic physical and mechanical principles. These questions could involve pulleys, gears, energy and power, motion, resistance, equilibrium, and fluidity.

Mechanical reasoning is important to firefighters because they must be able to understand how certain tools and pieces of equipment work. They must be able to operate pumps and other complicated equipment and position ladders.

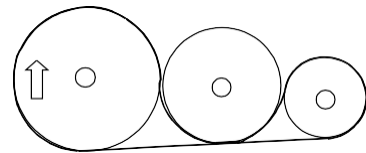
Example Questions

According to the gears pictured to the right, if gear B is turned in the indicated direction:



- a. gear A will turn in a counterclockwise direction.
- b. gear C will turn in a clockwise direction.
- * c. gears A and C will turn in opposite directions.
- d. gears A and B will turn in opposite directions.

If the largest wheel is moving clockwise, which of the following statements is true?



- * a. The smallest wheel will be moving clockwise.
- b. The smallest wheel will be moving counterclockwise.
- c. The middle wheel will be moving clockwise.
- d. The middle wheel and the smallest wheel will be moving clockwise.

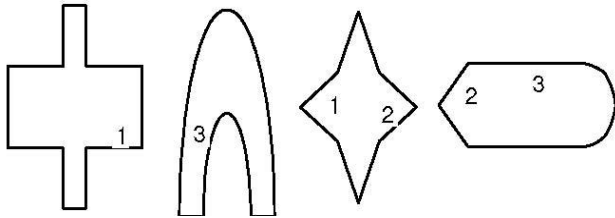
Spatial Orientation

You will be presented with various shapes and will be required to mentally rotate and rearrange the shapes according to some given specifications or to fit them into a certain pattern. The objects that are to be mentally assembled appear at the beginning of each item and often will be marked with one or more numbers or letters which identify some particular place on the object. There will be four choices of how the objects could be put together. The correct choice is assembled with the matching numbers or letters put together or lined up. You must choose the correct choice from the given arrangements. Only one of the choices is correct. The given objects may need to be flipped, turned, or rotated as appropriate.

When presented with these questions, it is helpful to examine each of the response choices individually, and within each response choice, examine each shape. It may be helpful to compare each shape of the response choices with the matching shape in the given figure. Look at the numbers or letters that label that shape in the figure. Carefully label that shape in the response choice with the same numbers or letters. After you do this for all of the shapes in the response choices, it will be much easier to see if the numbers or letters match. The response choice that has matching numbers or letters is the correct response choice.

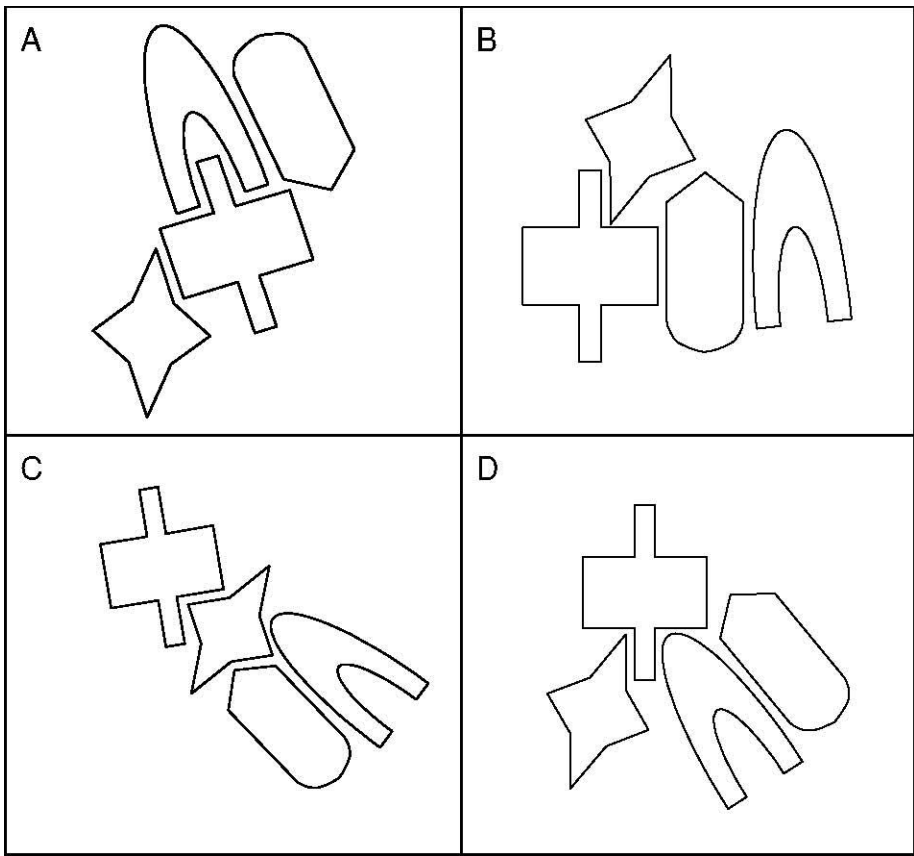
If you come across a response choice that seems to be correct, do not assume that it is in fact the correct choice. Continue this process of labeling the shapes for all of the response choices. It is possible that there is a better response choice. Also, if you continue to label the figures, you may discover an error that was made in labeling a previous response choice.

Example Question



Which of the choices below represents the parts above correctly assembled?

- a. A
- b. B
- * c. C
- d. D



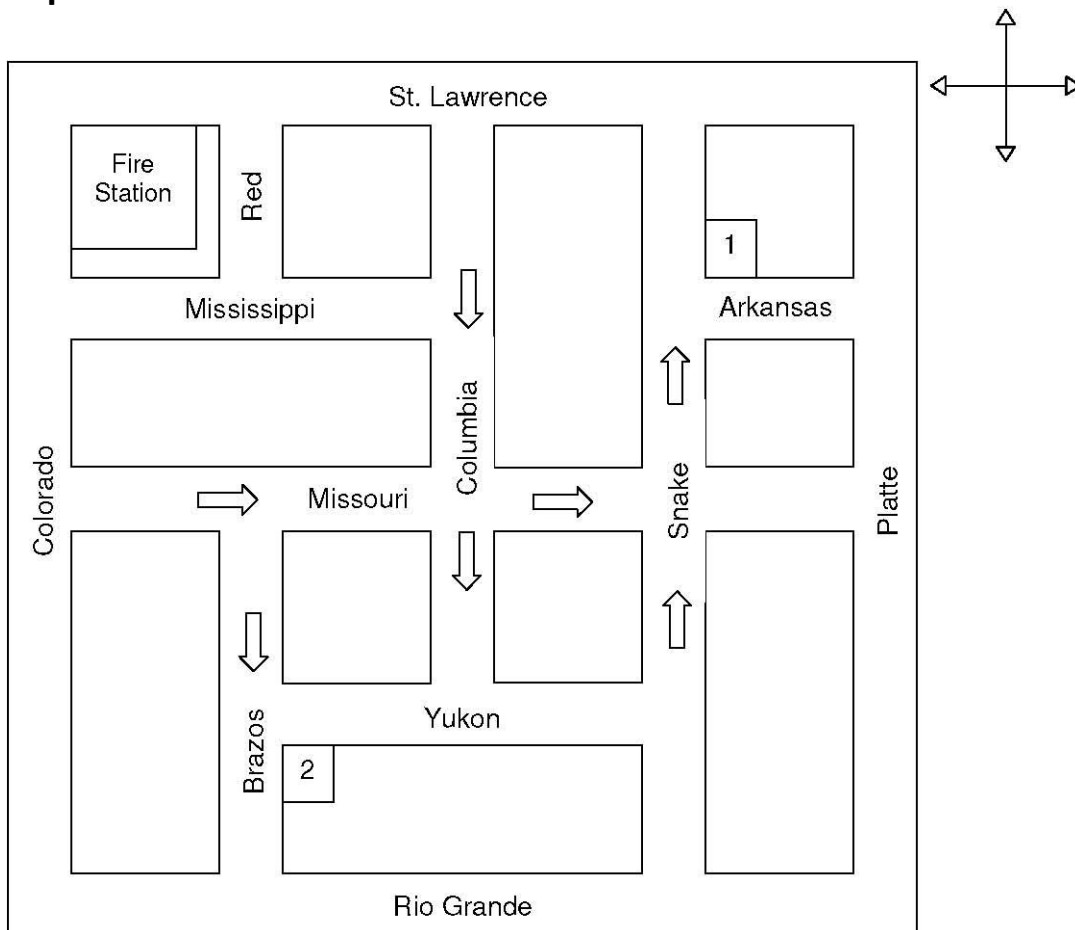
Maps – Spatial Scanning

Directional orientation is a well-documented ability for good firefighters. This ability assists firefighters to respond to urgent situations and go from one point to another more efficiently.

In the exam, you will be presented with a map or plot diagram. Based on this map or diagram, you will answer questions related to the most direct route from one point to the next.

Example Questions

Map 1



Refer to Map 1 to answer following questions:

From the fire station, you are to drive to the northeast corner of Snake and Arkansas (#1). Without violating any traffic laws, which of the following is the shortest and most direct route to the corner?

- a. east on St. Lawrence, south on Snake
- b. south on Colorado, east on Missouri, south on Columbia, east on Yukon, north on Snake
- * c. south on Colorado, east on Missouri, north on Snake
- d. east on St. Lawrence, south on Columbia, east on Yukon, north on Snake

From the fire station, you are to drive to the southeast corner of Brazos and Yukon (#2). Without violating any traffic laws, which of the following is the shortest and most direct route to the corner?

- * a. south on Colorado, east on Missouri, south on Brazos
- b. south on Colorado, east on Rio Grande, north on Brazos
- c. east on St. Lawrence, south on Columbia, west on Yukon
- d. east on St. Lawrence, south on Snake, west on Yukon

Flexibility of Closure

In this type of question, a picture of something related to fire suppression is presented along with four possible pictures below. Three of the four are slightly altered. You will be asked to identify which of the four pictures is exactly the same as the original picture given.

Read all instructions carefully. Your strategy should be to eliminate as many of the four choices as possible by focusing on the details of the given pictures, such as numbers, letters, or any other identifying information. Examine the choices one at a time until you have eliminated three of the four pictures. Double check all of the details of the original picture with the one you have chosen and verify that they are the same.

Example Question

A picture is placed above the question and four pictures are placed below it. You must choose the one picture that is an identical match.



Which of the following is the same as the above label?

- a. A
- b. B
- c. C
- d. D

*



BEHAVIORAL QUESTIONS

This part of the test is in multiple-choice format. However, this part of the test is different in that it asks questions about yourself and your life experiences, such as experiences in school, your interests, and your attitudes. For each question on this part of the test, there will be two or more possible answers. You should first read the question and then all of the possible responses. When you have done that, you should pick the one response which you think fits you best. On this part of the test, you should not pick responses which you think "appear right." They may not be the real right ones and, in fact, may produce a negative score. The best approach is to answer every question as honestly as you can and pick the responses which describe you or what you think is best. It is essential that you understand that some of your responses can be verified, and if you don't answer honestly, it may be checked, and your application can be rejected.

This part of the test is designed to explore issues relevant to your potential employment. The results of this questionnaire are only one of several factors that will be considered in your application for employment. These results are confidential and will only be reported to those in the hiring process on a need-to-know basis. Your job application can be rejected if you answer any questions untruthfully or if you fake an answer or skip a question. Please answer all questions. For each question, you must decide which one of the choices is the best answer for you personally. If no one answer seems to be perfect, choose the one answer that is slightly better than the others.

Example Question

In high school, the subject I enjoyed studying the most was:

- a. Math
- b. History
- c. Physical Education
- d. Art
- e. English

STRUCTURED ORAL INTERVIEW (SOI) INFORMATION

OVERVIEW

As stated above, you will be escorted to a holding room after you complete the written exam. In this holding room, you will watch a brief orientation where you will be read the dimensions and definitions on which you will be assessed, and you will sign a confidentiality agreement. At the appointed time, you will be escorted to the testing room and be seated at a table and laptop. You will be required to wear the headphones provided to you. You will be given 3 hypothetical scenarios. At the end of SOI, you will be escorted out to the checkout table to receive any belongings left at registration. You may then leave the building.

SPECIFICS

For each scenario in the SOI, you will be asked the question, “What would you do and why?” Each scenario and question will be read aloud, and you will be provided with a printed copy as well so that you may follow along.

You will have 4 minutes to ORALLY respond to each question(s). You can use as much or as little of your allotted time period as you choose. You must speak your answer within the four minutes for each scenario. However, if you have not completed your oral response in the allotted time-period, you must stop and move on to the next scenario.

Your response to each question is being video recorded. It is natural to be nervous. Many candidates have found the following suggestions to be helpful, but you must decide for yourself what would be helpful for you.

- Try to look at the laptop camera and speak clearly and loudly enough to be heard (do not speak softly). Many people find that watching themselves in a mirror or video recording themselves while they practice answering questions gives them an idea of how they will look on camera.

- Listen carefully to each scenario and its question(s) and formulate an organized, comprehensive response.
- Answer the question that is asked.
- Avoid rambling on about unrelated issues or, the opposite, providing answers that are too short and do not convey your knowledge on the subject.

Remember, these are just suggestions that other candidates have found helpful; however, ultimately, you must decide what is best for you.

Your video recorded responses will be rated by a panel of assessors after your SOI.

The following are dimensions for which you will be assessed in the Structured Oral Interview Process:

1. Problem Identification & Analysis (PI)

The ability to quickly identify a problem and to analyze it; to notice details or phenomena; to sort out pertinent information; to foresee the consequences of various alternatives. The ability to obtain relevant information from available information and screen out less essential details. The ability to use data and related information in order to evaluate a problem. The ability to logically interpret information in order to solve problems.

2. Decision-Making (DM)

The ability to make sound decisions promptly on difficult problems; the exercise of judgment and consideration of available information; the willingness to make a decision when required. Basically, the ability to use all information provided in order to take the most appropriate action and exhibit a willingness to make decisions when necessary.

3. Teamwork (TW)

The attribute that permits an individual to work in collaboration with a group of people to achieve a common goal or pursue a mission. It invokes the concept of being able to work with others in a spirit of cooperation, even under trying or difficult conditions. Teamwork includes the ability to overcome or disregard any personal conflicts with other members of a group in order to preserve the cohesiveness and effectiveness of the group itself. To a certain extent, it contemplates a commitment, when necessary, to put the interests of the group ahead of the personal ambitions or desires of the person.

4. Oral Communication (OC)

The ability to express ideas clearly, concisely, and effectively in oral form; to listen to others attentively and with comprehension. The ability to speak clearly, be easy to follow, display self-assurance, and appear unflustered.

The following are the typical instructions you will receive on test day:

This is the Structured Oral Process. You should have four (4) consecutively numbered pages beginning with this page. Please take a moment and count your pages. If you do NOT have four (4) consecutively numbered pages, please inform a Monitor. You will be asked to respond to three (3) scenarios. Once a scenario has been read, you will have a maximum of four (4) minutes to respond to the question for the scenario. You will present your response to each scenario to a laptop webcam. Your performance on this exercise will also be video recorded. You may use some of the four (4) minute period to consider your response and prepare before you begin talking; however, you only have a maximum of four (4) minutes for each scenario. Should you complete your response before the four (4) minute time limit elapses, you may say, "That concludes my response." You will then be directed to the next scenario. You MAY NOT look ahead to the next scenario until you are directed to turn the page by the monitor. Once the four (4) minute period is over for any scenario, you MAY NOT go back to that scenario. Should you use the full four (4) minute time period, the monitor will stop you by indicating time is up. The monitor will then direct you to move on to the next scenario. You may write on the Candidate Packet or take notes on the scratch paper that is provided. If you complete your response to the third (3rd) scenario before the four (4) minute time limit elapses, stay in your seat until a monitor gives you further instructions. You MAY NOT speak to other candidates until you are told you may do so.

CONCLUSION

Good luck! We know it is an important day for you and wish you the best of luck in the process.