



Written Examination Study Guide

for the rank of

Lieutenant

in the

City of Buffalo Fire Department

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INDUSTRIAL/ORGANIZATIONAL SOLUTIONS
PUBLIC SAFETY SELECTION EXPERTS

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Welcome!

Welcome to the 2017 study guide for the City of Buffalo Fire Department.

The purpose of this guide is to prepare you for the job-knowledge examination. We highly recommend you follow the guidelines and use the preparation tips provided in this guide.

Good Luck!

Introduction

I/O Solutions (IOS) has been retained to develop the lieutenant written examination for the City of Buffalo Fire Department. IOS is a public safety consulting firm located in the suburban Chicago area. The firm works exclusively with public safety clients (police, fire, sheriff's departments, correctional facilities, etc.) to develop, validate and implement promotional and entry-level selection processes. Our clients include the Houston Police Department, San Antonio Police Department, Dallas Police and Fire Department, Austin Police and Fire Department, Buffalo Police and Fire Department, Cincinnati Police and Fire Department, Indianapolis Metro Police and Indianapolis Fire, Minneapolis Police Department, Omaha Police and Fire Department, St. Louis Metro Police Department, Chicago Police, Fire and Chicago OEMC Department, Milwaukee Fire Department, Nashville Police and Fire, Tulsa Police and Fire Department, Albuquerque Police and Fire Department, Miami Police Department, Atlanta Police Department, Jacksonville County Police Department, Baltimore Police and Fire Department, San Diego Police Department, San Francisco Police and Fire Department, San Jose Fire Department, Raleigh Police Department, Illinois State Police, Massachusetts State Police and many more! IOS has worked with the city of Buffalo police department for approximately 10 years in developing promotional testing and entry-level (pre-hire) testing.

IOS has several goals in developing written promotional examinations for the City of Buffalo. First and foremost, the examinations must be valid, fair and legally defensible. A valid examination is **relevant** to the department and position in question, measures the critical knowledge, skills and abilities necessary for promotion, and aids the department in selecting highly qualified individuals for promotion. Also, the process should conform to appropriate legal guidelines regarding the selection and testing of candidates. In addition, the process should treat all candidates with dignity and respect, and rules should be fairly and equitably applied.

Contents of This Guide

This *Orientation and Preparation Guide* has been prepared to introduce you to the written promotional examination for the City of Buffalo Fire Department. The first thing you can do to prepare for the examination is to read this study guide. This guide will familiarize you with the written examination process and provide you with general information about the exam. Following are the sections that this guide will cover:

- Information on the format and structure of the exam
- General advice on how to study for the written examination
- The development of a study plan
- General preparation guidelines
- Test-taking principles
- Use of the answer sheet

The Job-Knowledge Examination

The written job-knowledge examination will likely consist of 100-items that are multiple-choice in nature. Each item will consist of the stem (the actual question) and four response options. All items in the exam will be closed-book – candidates may not use any source materials or preparation materials at any point in the exam. Source materials have been chosen and subsequent exam items will be written to test the knowledge that job incumbents must have committed to memory while performing the job.

Typical sources for such examinations include Department Policy & Procedures, Department Orders, Department Rules and Regulations, external management readings, external fire service readings and other external professional reading (i.e., building constructions textbooks). We have evaluated job analysis information for the positions in question, considered other fire service agencies and their approach to promotional testing (i.e., benchmarking) and considered past practices to help identify the written job-knowledge sources (e.g., specific policies, procedures, etc.) and develop the written examination items. The draft item pool may be reviewed with SMEs or I/O psychologists with expertise in promotional test development for large fire service agencies to ensure the examination and content is specific to the Buffalo Fire Department.

Format of the Job-Knowledge Examination

A job-knowledge exam consists of questions/items that are based on pre-specified resource materials; they cover material that is deemed important to successful performance on the job and is needed by memory. For more information regarding the pre-specified resource materials for your examination, please refer to the official reading list supplied by your department. Nearly all IOS examinations are closed-book and this examination will be closed book as well. Job-knowledge items are typically constructed in a multiple-choice format. In the case of this exam, this means that there is one correct answer option and three incorrect answer options. Your goal is to select the correct response from the four possible options.

The following is an example of a job-knowledge item. This item was taken from a previous job-knowledge examination and is presented as an “example item” to help you better understand the basic structure of the examination:

- I. Regardless of the method of attack you choose or the type of stream you employ, which two criteria will determine the appropriate size hoseline according to *Fire Officer’s Handbook of Tactics*?
 - a. The hose must discharge a sufficient amount of water to remove the heat, and there must be a sufficient number of responders at the scene to control the hose.
 - b. The hose must be appropriate for the type of fuel being burned by the fire and for the length of time the fire has been burning.
 - c. The water must reach the heart of the fire, and the hose must discharge a sufficient amount of water to remove the heat.
 - d. The hose must be appropriate for the length of time the fire has been burning, and there must be a sufficient number of responders at the scene to control the hose.

Answer:

Option c is the best answer according to *The Fire Officer's Handbook of Tactics*, 2nd Edition, Ch. 4, pg. 54, paragraph 3.

General Study Guidelines

As alluded to previously, it will be absolutely necessary to thoroughly read and review all examination source materials and study for the examination to increase your chances of performing well. There are many proven methods of study that can enhance your performance when applied appropriately. It should be noted that different methods work better for certain individuals. The following provides a few brief suggestions on methods of preparation for the exam.

Importance of Reading the Study Material

It is critical for candidates to read all of the study material thoroughly. One goal in the test development process is to identify the relevant job knowledge someone needs upon promotion. Therefore, this study material was chosen by subject matter experts within your department to target important job-knowledge areas associated with successful performance. Subsequently, IOS develops all examination questions directly from the identified source material. Thus, becoming familiar with the source material can significantly improve your exam score.

Many candidates simply fail to read (or study) the examination material and conduct little or no preparation for the written examination. IOS has conducted extensive research on the relationship between candidate study habits and test performance. The single greatest factor impacting candidate performance is examination preparation. In particular, simply reading the sources has a substantial impact on test performance. In our research, candidates who simply read the examination sources pass the examination (when a cut score is utilized) at a rate of 80%. In contrast, those candidates who fail to read the source material pass at a rate of 30%. Simply reading the examination material can put you in a position to be promoted depending on the specifics of your promotional process!

Note Taking or Other Documentation Techniques

Many individuals find it helpful to take notes on the important material during the course of their reading. With this method, you can put the author's ideas into your own words, which will be easier for you to recall at a later date. Another similar study method involves making "flashcards" on 3" x 5" note cards. The goal of either method is to condense the amount of reading material to the most important and relevant aspects of the source. Also, your goal should be to make this material understandable in your own words. For example, read a section of policy/orders (e.g.) and take some time to decipher the meaning of the code. Then, in your own words, explain the nature and meaning of the policy/order in your notes or flashcards. With either method, you should be prepared to spend some time studying the notes or flashcards in the weeks prior to the exam.

When reading the source materials, you may also want to highlight information that you think is particularly important with a highlighter/marker. Later, as the exam date approaches, you can review the highlighted material. If done properly, this method could supplant note taking and will take far less time than preparing notes or flash cards.

Study with a Partner/Group

Many individuals find it helpful to study with a partner or group of individuals who are also preparing for the exam. This way you can discuss the material with them, determine what the most important material is and analyze difficult concepts. In addition, study groups can divide duties and prepare brief summaries on the reading material to share with other group members. You might try preparing brief summaries or having various group members describe a particular issue or section of the reading material in an informal presentation. Explaining and describing material to others is a great way to learn the material yourself!

If you have found that you study most effectively by yourself in the past, then try to limit the amount of time you will spend studying with a partner or group. If on the other hand you have found that studying with others helps you quite a bit, then form a study group with other people who are taking the same examination as you. You may find that forming a study group has another important benefit—your commitment to studying may increase (you do not want to let your team down) and thus you may be more focused and motivated in your efforts! More information about studying with a partner or group is provided below.

Answer Practice Questions

If a practice test is available on a particular subject, you should take the time to complete it. If there is not one available, there are several other methods of preparation to help you in answering exam questions. First, if the source material has “questions for review” at the end of each chapter (e.g., if using a textbook), you should try to answer these questions immediately after reading the material. In addition, once you have completed a section of material, you can review the material and try to determine what questions might be asked of you on an examination. You should be able to answer these questions once you have read the material.

If you have assembled a study group, you can prepare practice questions as part of your group efforts. There is no need to focus on the specifics of item construction. You can simply create basic test questions with a single correct answer and multiple response options. Most of the examination questions will follow this basic structure. If your study group has divided up the test content for analysis, you can ask individuals to develop practice questions for their area of focus.

Study the Material

This may seem rather evident, but there are two steps to studying. First, you must read the material. Then, you must review the material at a later time. While we often call the entire process “studying”, this review phase is really at the heart of the study period. This may involve reviewing notes, highlighted portions of the material, creating and reviewing flashcards, conducting group study sessions or completely re-reading the source. Regardless, there should be at least one review of the material to gain understanding and help with recall when the actual test occurs. It may go without saying, but if you spend time taking notes, making flashcards or highlighting during your initial reading/study phase, you should then spend time reviewing this material before the exam. For example, if you choose to highlight important material from the text, you should spend some time the week before the exam reviewing the highlighted passages. This may involve reading the highlighted sections several times.

One common mistake that occurs on occasion results when candidates spend a great deal of time preparing notes or flash cards and then misallocate their preparation time and do not allow enough time to review this important material. You should look at the development of these materials as an investment. You must allow for time at the end of the study period to recoup the cost of your investment (i.e., your time) such that you spend time reviewing this important material.

Keeping Organized

Once all of the suggested materials have been collected, you will have a lot of information to sift through. In order to keep track of all of these materials, organization will be key.

To help with organization, follow these guidelines. They will help you compile the information into meaningful groups.

1. Put all the materials in front of you and begin separating them by topic. For example, put all response procedure related materials in one pile and all leadership related materials in another pile. Group the materials in whatever way is most meaningful and helpful to you.
2. Find some method to hold these materials in their respective groups. This can be a large binder or folder.
3. On each folder create a table of contents. This will make it easier to find what you are looking for.
4. Use bookmarks, tabs, or sticky notes to mark specific information you wish to reference.
5. If you remove a piece of material make sure to replace it or update your table of contents to reflect the move.

Scheduling

Now that you have set your goals and organized your materials, it is time to set a schedule for yourself. This schedule will keep you on track and help keep yourself accountable for your progress.

Here are some steps for creating a successful schedule:

- Make your schedule practical! Many people will set an unrealistic timeline and then become discouraged when they cannot make the deadlines.
- Allow yourself enough time to study each topic.
- Prioritize. Start with the most challenging and important topics.
- Schedule short but frequent study times. Try to keep blocks of study time to 2 hours or less.

- If you are planning to study with a group make sure to set a schedule that everyone can adhere to.

Individual Study

Developing a Study Plan

A typical designated study period is approximately 90 days. It is in the best interests of the candidate to use the entire study period to prepare for the examination- this means beginning your preparations immediately! Typically, a candidate will use the initial portion of the study period to read the material and highlight, take notes or make flashcards. Thus, for a 90-day study period, a candidate may spend the first 60-70 days reading all of the source material. The final three to four weeks might be spent reviewing notes or other study material and re-reading important sections of the source material.

Typically, candidates can read 15-30 pages of textbook material or department policy in an hour. In contrast, candidates can usually read approximately 10-20 pages of highly technical material in an hour. Highlighting usually doesn't add any significant time to the reading period although taking notes and/or developing flashcards can add a significant amount of time. Taking detailed notes will probably slow an individual to approximately 10-20 pages per hour (textbook material). While this process may slow your progress through the material, good notes can be invaluable to the study process.

Given the guidelines above, you should estimate the overall time it will take to read all of the source materials for the exam and then plan your study process accordingly. For example, you may determine that you have approximately 400 pages of text/department policy to read and 200 pages of highly technical material. You might estimate that you can read 15 pages of text per hour and approximately 10 pages of the technical material per hour. Thus, you estimate that you will need to spend approximately 47 hours to simply read the source material. In addition, you have decided you will highlight relevant material and make flash cards on critical information. Thus, you estimate that the time to progress through all of the source material and create the flash cards will increase the reading/study period by approximately 150 percent. Therefore, you determine it will take approximately 117 hours to read, highlight and take notes on all of the source material (47 hours to simply read and another 70 hours to take detailed notes and create the flash cards). If you spend the first 12 weeks on reading the source material and preparing these materials, you will have to spend approximately 10 hours a week on your preparation. You might decide to devote two off-days per week to examination preparation, such that you nearly spend a full day reading and preparing materials for your study and review.

Finally, you should spend some time studying the material before the exam. It is a good idea to use the last few weeks before the exam to review the material thoroughly, study and memorize critical facts. During this time period, you may up your preparation to 2-3 days per week devoted to the examination.

The study plan outlined above represents the minimum of what might be required of you to obtain a “reasonable” score. In a competitive process, such a study plan for an “average test-taker” may not result in a score sufficient enough to be promoted in the promotional process. Thus, you may need to do more to prepare for this examination! Ultimately, the decision on how much time to use in preparing for the examination will rest with you based on your motivation and comfort level.

Goal Setting

In preparing for the examination, you will be exposed to a large amount of study materials. Using goal setting, you can develop a process to successfully navigate these materials in an efficient and effective manner.

Goal setting is the process of taking a broad goal, such as passing the examination, into smaller, specific, and manageable goals. This method has been shown to increase motivation and retention of knowledge.

To use this tool:

1. Determine your overall goal.
2. Break this overall goal down into small and specific goals.
3. Write down all of your goals someplace you can easily find for your study period.
4. Rank the goals in order of need. Think of it like a pyramid. What things do you need to learn first in order to better understand subsequent information?
5. Set the time frame in which you plan to achieve each goal (i.e. 2 days or 1 week).
6. Determine how you will achieve each goal. What materials will you need? What is the best way to learn the material relevant to this goal?
7. Keep track of your progress on each goal.

SQ3R Study Method

The acronym SQ3R stands for the five sequential techniques that have been used as a strategy to enhance the understanding and retention of reading material. This strategy includes the following steps:

- **Survey.** Start by gathering the information necessary to focus your understanding of the chapter. Read the chapter title, read the chapter introduction, section summaries, and conclusion, scan through the contents of the chapter (e.g., section headings, diagrams, and pictures). If studying policy, procedure or department orders, you can read the introductory paragraphs and spend time scanning through the policy to gain an understanding of the material before you begin to delve into the specific details of the material. Aim to gain an overall understanding of the structure of the material and how the main concepts are related.

- **Question.** Go through each section of the material and turn the headings into questions that you think will be answered in that section. Write your questions down on a piece of paper. In the next step when you begin reading the sections, you will write down your answers that go along with each question. The purpose of this step is to help you become actively engaged in the reading by having you seek the answers to the questions that you have formed.
- **Read.** Reach through each section, keeping the questions you have formed in mind. Read the section, seeking information to answer the questions that you have written down. Pay attention to determine if there are any other questions that need to be included.
- **Recall.** When you have completed reading through a section, stop and try to answer the questions you have composed without looking back at the reading material. If you cannot come up with the answers, go back to the section as many times as you need to until you can answer your questions from memory.
- **Review.** After you have completed reading through all of the sections using the aforementioned steps, you should continue going over the questions you have created and trying to answer them from memory. If you cannot answer them, you can look back to the material to refresh your memory and then continue to review. Review the material often in the weeks and days leading up to the exam.

Memorization

There is certain material that must be memorized for an exam. While, for example, we can advocate reading and taking notes in your own words, it is important to understand that some material must be memorized directly from the source. IOS writes exam questions directly from the source material and often uses the wording as it appears in the source material. Thus, recalling the specific information from the passage can be critical in determining your success on the exam.

One-On-One Studying

Studying with a partner is a great way to cover a lot of information. One of the most important steps in one-on-one studying is choosing the right study partner. When choosing a partner, try to select someone who shares similar study habits as you. Make sure that the partner also has a similar level of motivation and similar pace of learning as you. Finally, make sure you select a partner who is studying the same material as you.

Study Techniques

- You can each cover a different topic and then spend time explaining them to one another.
- You and your partner can study the same material then create questions to quiz each other.
- A partner can be helpful when you are having a hard time understanding a subject; use their different perspective to help look at the information in a different way.

Things to Keep In Mind

- If you decide to split up topics and explain them to one another, be sure to still read through the material that was assigned to your study partner.
- When quizzing each other, try to focus on the major topics from the source material, rather than focusing on highly specific information unless that is the nature of the material (e.g., learning definitions to terminology).
- It can be easy to get off-track with side conversations, try to stay focused on the material for the exam.

Group Study

Studying with a group can be a very effective way to cover a lot of information. However, this effectiveness is dependent on the members of the group.

Characteristics of Effective Study Groups

- The group should contain no more than 6 members.
- There should be a group leader at every study session. It does not have to be the same person every time.
- All members should participate. Information is more easily remembered when it is discussed with others.
- Group members should differ in their area of expertise. This will allow for more effective information sharing.

Starting a Study Group: The first meeting

- Gather the group members together for an initial meeting.
- Have the group decide on a leader. This can be for every study session or it can rotate.
- Ask someone to scribe the information the group covers. This responsibility can also revolve.
- Set some ground rules (i.e. be courteous to others). You may find these rules will not need to be referenced once they are created but they are an effective tool in preventing future conflicts.
- Create a plan for the sessions. This includes setting up a schedule, topics to be covered, and group member responsibilities.
- Summarize the information that was covered in the meeting to ensure all members are on the same page.

Conducting the Study Group

- Clearly define what will be studied prior to each group session.
- Plan to hold the study group for about 2 hours, taking period breaks.
- Start each meeting by briefly reviewing what was studied last meeting and resolving anything that was unclear.
- Keep the group on-task by limiting other activities during the session (e.g., turn phones off, no checking email, limit side conversations).
- Conclude with a brief review of what was covered and a reminder of what will be covered in the next meeting.

Additional Study Tips

- Be sure you are studying from the correct source material. Check all sources (and their edition/publication dates) against the reading list.
- Determine a study schedule that works best for you. This might include finding the best time of day for you to study. Individuals have an optimal time of the day where they can focus best on information—determine when this occurs for you. Don't try to study when you are tired.
- Find a quiet location where you can focus your efforts and energy. This location should be free from distractions.
- Set aside time each day for preparation and begin your preparation early. While many individuals will spend more time later in the study period, this should not give you license to “cram” at the last minute!
- Take notes and highlight important areas as you study and prepare for the examination. You should then go back and review this material closer to the test date. You might wish to write main topics and concepts down on index cards. You can then “study” or refer to these index cards closer to the examination date.

General Test-taking Strategies

There are several strategies and tips to keep in mind when taking the written test that will ensure your test score is accurate and reflects your level of knowledge about the job.

1. **Listen carefully.** The exam administrator will provide you with complete instructions for taking the exam. Be sure that you pay close attention to all test instructions. It is extremely important that you completely understand the directions before the exam begins.
2. **Ask questions.** If there are instructions that you do not understand or if something is not clear, please feel free to ask the exam administrator any questions that you may have before the exam begins.
3. **Note start and end times.** Just before the test administrator begins the test, make a note of the time the test will actually begin and the time that the test will end.
4. **Keep track of time.** It is important that you keep track of your time so that you are able to pace yourself throughout the exam. You do not want to run out of time and have unanswered questions. It is important that you allot a few minutes of time to guess on unanswered questions at the end of the exam. A typical 100-item examination will have a 2 hour and 30 minute time limit. This means you must answer each question in approximately 1 minute and 30 seconds to ensure you complete the examination on time.
5. **Remain calm.** It is important that you remain calm throughout this exam so that you are able to work most effectively. You can't allow yourself to become nervous or confused by a few difficult or challenging questions. There are going to be times when you are not going to know the answer and neither will other individuals taking the exam.
6. **Read each question carefully.** Be sure that you understand what the question requires of you.
7. **Try to answer the question before you look at the answer options.** If you know the answer, compare it to the available choices and pick the choice closest in meaning to the answer you have in mind.
8. **Answer easy questions first.** It is important that you answer the easy questions first on this exam. By doing so, you will afford yourself more time to spend on the difficult questions if necessary. Seek out questions you can answer. If there are particular kinds of questions with which you feel most comfortable, answer those questions first. For example, if you are particularly good at questions in a specific content area, then find those items first and complete them.
9. **Don't waste time on questions you can't answer.** If you believe that you are not able to answer a question, then skip it. It is better to skip a difficult question than to spend a lot of time on it and not be able to complete other exam questions.

10. **Mark your exam booklet.** Mark in your exam booklet those questions that you have skipped so that you are able to come back to them later in the exam. Marking questions that you have skipped in your test booklet will help to ensure that you have answered all of the questions by the time the examination period has ended. That said, you will likely be required to place all final answers onto a separate answer sheet.
11. **Use markings in your booklet to help guide your response.** You might consider using slash marks to break down complex sentences into small segments that are more easily understood. By breaking down a question into smaller parts you will be able to more easily examine all parts of the question. You might also wish to circle key words works in a sentence that make it easier when you have to find the answer. Another strategy is to underline clue words in an item stem such as some, all, every, sometimes, and, or, and related words.
12. **Use a process of elimination.** If a situation presents itself in which you are unable to answer a question, use a process of elimination to narrow your options. First, eliminate any answers that are clearly wrong. Then determine how you feel about the remaining choices. If you believe that some answers are more correct than others, indicate that on your exam booklet. Later in the exam, you may have an opportunity to come back to these questions and answer them without having to read the entire question again.
13. **Guessing.** It is important that you try to get as many points as possible on the examination. Points are given for correct answers only. Because there is no penalty (i.e., points deducted) for guessing on this exam, you should try to answer every question. By leaving yourself enough time at the end of the test to fill in unanswered questions using your "best guess," you will increase the possibility of getting a few of them correct.
14. **Extra time.** If you finish the exam before the time period is over, review your answers and make any changes that are necessary. Also make sure that you have marked your answers on the answer sheet correctly.

Using the Test Answer Sheet

This section describes the procedures used to fill in the answer sheet during the actual exam. All of the questions on the examination will be multiple choice. *You will mark your answers on a separate answer sheet that you will be given at the examination, and detailed instructions on how to use it will be outlined for you at that time.*

Things to consider when marking the answer sheet:

- Make heavy black marks that fill the rectangles (or ovals) completely.
- Erase any answers you wish to change completely.
- Do not make any other marks on the answer sheet.
- You must use a #2 pencil (this will be provided to you), unless otherwise instructed. Pencil is required to complete the answer sheet because a computer will be reading these marks.
- Place all of your answers on the answer sheet. Only answers on the answer sheet will be scored. You may use your exam booklet as scratch paper but be certain to record your answers on the answer sheet.
- Use your *exam booklet* for scratch paper.
- Be sure that the number of the question you are working on corresponds with the number that you fill in on the answer sheet. For example, if you are working on question 37, make sure that you fill in your answer on line 37 of the answer sheet. Periodically check yourself to make sure that your answers are in the correct spaces.
- For multiple-choice items there will be four alternatives (a, b, c and d) listed on the answer sheet for each question. Please be sure that you mark your answer in the appropriate column. You may want to go back and check your answers periodically to be sure that you have placed your answer in the correct column.

The reason that we ask you to take such care in marking your answer sheet is because errors can affect the scoring of your written examination.

Helpful Hints about the Exam

This section describes a few helpful hints to remember when preparing for the exam and in regard to answering questions on the examination.

- Exam questions are written directly from the source materials. Questions are often written “word-for-word” from the source to avoid confusion. Thus, the correct answer is also drawn directly from the source (not from subject matter expert input). In many cases, the distracters, or incorrect answers, are also drawn directly from the source. Thus, the information may “look familiar” but still be incorrect.
- Since questions are drawn directly from the source material, it is important to note that the correct answers (and hopefully your answers) will be taken directly from this source material. If there is a conflict between “how things are done in the department” and what the source indicates, the source is the deciding factor! In many cases, such items are removed during the review process. In some cases, these items remain in the examination to reinforce “how things should be done.”
- Furthermore, in the rare event that two sources conflict with one another, your answer (and the correct) should come from the source indicated for that particular item. Items are often presented by the source material that they were written from. Thus, you will be informed where the item was written from.
- We attempt to avoid questions on trivial information that is not directly relevant to the job. At a minimum, you should focus your preparation efforts elsewhere. That said, some items may be more difficult and test your knowledge of the details of a particular policy.

Preparing for Test Day

Diligently studying for this exam will be the best method for ensuring your success; however, there are other considerations that can affect your performance on the day of the exam. Your attitude on the day of the exam, the test-taking strategies you use and your ability to avoid common test-taking errors will all affect the outcome of the exam. These issues are discussed in detail below.

Preparation for the exam

You will increase your chances of obtaining your best score if you spend a lot of time preparing for the exam. This includes carefully reading and studying the materials listed in the *Examination Source Material list* as well as this *Orientation and Preparation Guide*. It is also important that you avoid becoming overly anxious about the exam and implement good test-taking strategies.

Your physical well-being

Get a good night's sleep before the exam. Eat a nutritious breakfast that will provide you with energy for the day. Try to ensure that you are in the best possible condition both physically and mentally on the day of the exam. Fatigue is recognized as a serious impediment to success on a written examination.

Arrive early

Make all necessary arrangements to ensure that you arrive early at the exam site. If you are unfamiliar with the location, you may wish to investigate the location or leave even earlier. It would be wise to anticipate traffic delays in traveling to the exam site and to allocate extra travel time to ensure an early arrival even with delays. Also, some sites have limited or challenging parking and may cause you to arrive later than you'd like. Please understand that arriving later than you would like will likely cause you a great deal of stress and that this stress can interfere with your performance. More importantly, later arrivals may be prohibited based on city rules and procedures.

Confidence

The more confident you are in your abilities, the more likely you are to do well on the exam. Try to stay focused so that you don't end up misinterpreting questions or instructions. You want to take control of the exam by feeling confident in your skills. Try to relax but concentrate on the exam you are about to take.

Attitude

This exam is an opportunity for you to demonstrate that you have a grasp of the job knowledge necessary to perform successfully, and a positive attitude can have an impact on increasing your exam score. There are a few ways to fine-tune your attitude about taking this exam: Look at this exam as a challenge but try not to get "stressed out" by thinking about it too much. By using this *Orientation and Preparation Guide* and practicing your strategies, you can be more prepared for the exam.

Basic Rules Governing the Testing Process

1. Promptness is mandatory for admittance to the test on the date and time scheduled. Please ensure that you arrive at the site well before the examination to avoid being late. No candidate will be admitted once the first candidate is finished. IOS may not admit any candidates who are not present at the time the exam begins.
2. Photo identification will be needed for admittance to the test.
3. You may bring the following supplies to the test: #2 pencils, erasers and a watch. A small pencil sharpener and ear plugs are also allowed. Please note that if you choose to bring either a watch or ear plugs, they must be traditional. In other words, these items should not have any technological functions. If you have questions about the materials you wish to bring into the examination room, please check with a proctor when you sign in. No other supplies will be permitted at the test site. Pencils will be supplied during the administration of the written exam.
4. Beepers/portable phones and any other electronic or communication devices must be turned in prior to testing or left in your vehicle. We strongly suggest that you leave electronic devices in your vehicle for the duration of testing. If you choose to use an unauthorized communication device, in violation of testing guidelines, your test will be collected and considered invalid.
5. You will not be allowed to take any other materials with you into the examination room—this includes paperwork of any kind, backpacks, portfolios, etc.
6. Once you are seated in the exam room, you will have access to restroom facilities, though you may have to be escorted by a proctor. Once testing begins, any time taken for this purpose will be counted as test time.
7. You will undergo the same standardized process as all other candidates with respect to the testing process (e.g., notification, instructions, etc.).
8. Due to the security measures that will be in place, only authorized candidates will be admitted to the test site.
9. All questions or concerns that arise during the testing process should be directed to the appropriate designated test administration staff person(s).

Post-Test Scoring, Review & Appeal Processes

Immediately after the examination is completed, post-test processes will often commence. The post-test processes typically include two optional sessions. In the first session, you will be allowed an opportunity to conduct a *preliminary grading* of your examination. In the second optional session, you will be given an opportunity to review an examination and a copy of your answer sheet. At this time you may file any examination or item-level appeals. The following section will describe a typical post-test scoring, review and appeal process conducted by I/O Solutions. Please note that this process is often modified for a particular agency and that minor deviations may be in effect. All procedures will be explained on the day of the test.

Preliminary Grading Process

An unofficial grading process is utilized to meet several goals. First, it increases trust in the process by allowing candidates to immediately score their examination. Secondly, it decreases anxiety by providing immediate feedback. Finally, it facilitates an efficient appeals process immediately after the written examination. This is considered a preliminary or unofficial grading of the examination as the machine scoring, after appeals, will be considered the final and official examination score. The following steps outline a typical post-test scoring process.

1. If you choose to stay for the post-test procedures, you will turn in your examination materials and check-out with the examination administrator. You will leave the testing area at this time and you should ensure that your communications do not interfere with those still working on the examination. You must be available to the examination administrator as the post-test process will begin shortly after the last candidate completes the examination.
2. Once the last candidate completes their examination (or once time expires) there will be a 15-30 minute administrative break. After approximately 15-30 minutes, all interested candidates will reconvene in the testing room. Candidates will be provided with a photocopy of their answer sheet and in some circumstances, a copy of the answer key will be provided.
3. The test administrator will orally review the answer key, providing the correct answer for each item in the examination. Candidates are asked to conduct an unofficial and preliminary grading of their test at this time and to document their score.
4. Candidates are allowed a pre-specified time period (typically 10 minutes) to determine their preliminary score.
5. At this time, examination materials are collected from candidates not wishing to attend the post-test review and appeal session (the second optional session). This session starts immediately after the scoring session.

Post-Test Review and Appeal Process

After the preliminary grading process, a second optional session will be held. In this session, examinees may review a copy of an examination along with a photocopy of his/her answer sheet. At this time, and this time only, candidates are allowed to submit appeals to the examination and/or examination items. While department procedures may vary, I/O Solutions will only respond to written appeals collected during this session. In addition, you will not be allowed to review your examination at a later date and file appeals at any other time. The appeals process is conducted at this time to allow for administrative efficiency. Often, human resources personnel bear a burden of scheduling and overseeing test review sessions over the course of several weeks (after the administration). This process detailed below also allows for a defined period of time in which examination appeals may be accepted and facilitates the development of a final written examination eligibility list in a timely manner. The following steps outline a typical post-test review and appeal process.

1. After other candidates have been checked out of the examination, post-test review and appeal procedures will be presented by the examination administrator and an examination booklet will be provided. Please note that the post-test review and appeal process is considered part of the examination administration and thus is an individual process. You may not work with others during this process and you may not talk.
2. You will have a predetermined period to time (typically 60 minutes) to review an examination booklet and answer sheet. During this time you may file examination appeals.
3. All appeals are collected in written form and no 'verbal' appeals will be accepted.
4. You may bring your examination sources with you on the day of the test. While you may not bring the sources into the examination room during the actual test administration (you should leave them in your vehicle or outside the room), you may be allowed to bring sources into the post-test review process. An announcement will be made on this matter during the examination administration instructions.
5. Please note that you may not take out any written documentation from the post-test review process. This includes both documentation provided to you and notes that you generate. Thus, if your personal source materials are allowed into the post-test review process, you are forbidden from writing in these documents.
6. At the end of this session you will turn in any appeals you have generated. I/O Solutions will only respond to appeals generated during the official test review and appeal session. I/O responds to all appeals in writing and provides these responses to the agency

contact. The agency may form their own internal panel to review appeals and I/O's responses.

Appeal Guidelines

While any appeal may be filed, only appeals meeting specific standards will be reviewed and answered. Please review the following guidelines regarding examination appeals.

- Appeals must be specific to a particular question. Generic appeals or appeals to the “examination as a whole” will be discarded.
- Appeals must clearly state why an item is problematic and what other distracter(s) could be interpreted to be correct. If you believe that none of the response options are viable, you must clearly explain why this is the case.
 - Generic appeals related to an item will be summarily dismissed (e.g., “This item is poor”)
- When possible, appeals should state *where* the “correct” answer is contained in the source material. Exceptions include situations where there is no correct answer according to the source material.
- Items are written such that one must choose the BEST answer from the response provided. Thus, it is not acceptable to indicate that there is a better answer not included in the response options.
- Items are written from a particular source and one must answer according to that particular source. The source from which the item is drawn is clearly articulated in the examination booklet. It is not acceptable to claim that another source material contradicts the specified examination material where the item was drawn from.
- It is not acceptable to claim that a source is incorrect. All items in a job-knowledge test are written from a particular source (not from internal SME opinions). The source is considered the “governing body of knowledge” for the examination and a particular item.
- Appeals can not specify that an item is not *relevant* to the rank in question. During the examination development process, an SME panel reviews and approves all items for the examination. As part of the validation process, SMEs rate the relevance of the items and items with low relevance ratings are removed from the examination. All items in the examination were deemed relevant and appropriate by internal SMEs.
- It is not acceptable to claim that a common department *practice* conflicts with a specified department policy included in an examination question.

It is the policy of I/O Solutions, when possible, to give credit to all candidates for acceptable examination appeals. Thus, items are rarely removed from the test. In addition, depending on the specific nature of the appeal, it may be necessary to double-key an item so that more than one answer is considered correct.

A final note regarding cut scores

Please note that a determination has yet to be made regarding a cut score for the final promotional score, which is made-up of the written examination and secondary assessment scores. If a cut score is utilized in the testing process, the raw score corresponding to “minimally qualified” will be reported as 70% on a scale of 0% to 100%. That said, the raw score associated with this minimum qualified score can be above or below 70 (though typically below). This score standardization is done so that the testing procedures are in compliance with local and state laws.

Buffalo Fire Department
Written Job-Knowledge Exam Sources Plan: Rank of Lieutenant

NOTE: Some source materials have a limited set of chapters/sections/lessons/units/etc. included. Only the chapters/sections/lessons/units/etc. listed below are included in the testing material. All pages within a chapter/section/lesson/unit/etc. are included, unless otherwise noted.

John Norman, "FIRE OFFICER'S HANDBOOK OF TACTICS" (4th Edition)
<i>Only the following chapters are INCLUDED:</i>
Chapter 1. General Principles of Firefighting
Chapter 2. Size-Up
Chapter 3. Engine Company Operations
Chapter 4. Hoseline Selection, Stretching, and Placement
Chapter 5. Water Supply
Chapter 6. Sprinkler Systems and Standpipe Operations (p. 144-164 ONLY)
Chapter 7. Ladder Company Operations
Chapter 8. Forcible Entry
Chapter 9. Ventilation
Chapter 10. Search and Rescue
Chapter 11. Firefighter Survival
Chapter 12. Operations in Lightweight Buildings
Chapter 13. Private Dwellings
Chapter 14. Multiple Dwellings
Chapter 15. Garden Apartment and Townhouse Fires
Chapter 16. Store Fires – Taxpayers and Strip Malls
Chapter 17. High-Rise Office Buildings
Chapter 18. Buildings under Construction, Renovation, and Demolition
Chapter 19. Fire-Related Emergencies: Incinerators, Oil Burners, Gas Leaks
Chapter 21. Structural Collapse
Francis L. Brannigan and Glenn P. Corbett, "BRANNIGAN'S BUILDING CONSTRUCTION FOR THE FIRE SERVICE" (5th Edition)
<i>Only the following chapters are INCLUDED:</i>
Chapter 2. Concepts of Construction
Chapter 3. Methods and Materials of Construction, Renovation, and Demolition
Chapter 5: Fire Behavior and Building Construction
Chapter 6. Features of Fire Protection
Chapter 7. Wood-Frame Construction
Chapter 8. Heavy Timber and Mill Construction
Chapter 9. Ordinary Construction
Chapter 10. Noncombustible Construction
Chapter 11. Fire-Resistive Construction
Chapter 12. Firefighting Concerns of Green Construction
Chapter 13. Specific Occupancy-Related Construction Hazards
Chapter 14. Collapse
Daniel Limmer, Michael F. O'Keefe, and Edward T. Dickinson, MD, FACEP, "EMERGENCY CARE" (13th Edition)
<i>Only the following chapters are INCLUDED:</i>

Chapter 1. Introduction to Emergency Medical Services and the Health Care System
Chapter 2. The Well-being of the EMT
Chapter 3. Lifting and Moving Patients
Chapter 4. Medical, Legal and Ethical Issues
Chapter 5. Medical Terminology
Chapter 9. Airway Management
Chapter 10. Respiration and Artificial Ventilation
Chapter 11. Scene Size-Up
Chapter 12. The Primary Assessment
Chapter 13. Vital Signs and Monitoring Devices
Chapter 15. Communication and Documentation
Chapter 17. Respiratory Emergencies
Chapter 18. Cardiac Emergencies
Chapter 19. Diabetic Emergencies and Altered Mental Status
Chapter 20. Allergic Reaction
Chapter 21. Poisoning and Overdose Emergencies
Chapter 23. Behavioral and Psychiatric Emergencies and Suicide
Chapter 25. Bleeding and Shock
Chapter 26. Soft-Tissue Trauma
Chapter 27. Chest and Abdominal Trauma
Chapter 28. Musculoskeletal Trauma
Chapter 29. Trauma to the Head, Neck, and Spine
Chapter 31. Environmental Emergencies
Chapter 32. Obstetric and Gynecologic Emergencies
Chapter 33. Pediatric Emergencies
Chapter 34. Geriatric Emergencies
Chapter 35. Emergencies for Patients with Special Challenges
Chapter 39. EMS Response to Terrorism
IFSTA, "FIRE AND EMERGENCY SERVICES COMPANY OFFICER" (5th Edition)
<i>Only the following chapters are INCLUDED:</i>
Chapter 1. The Company Officer
Chapter 2. Organizational Structure
Chapter 3. Leadership and Supervision
Chapter 5. Communications
Chapter 7. Health and Safety Issues
Chapter 8. Company-Level Training
Chapter 9. Community Relations and Company-Level Fire Inspections
Chapter 11. Delivery of Emergency Services I
ICMA, "EFFECTIVE SUPERVISORY PRACTICES" (5th Edition)
<i>Only the following chapters are INCLUDED:</i>
Chapter 1. Roles of a Supervisor
Chapter 2. Supervisory Leadership
Chapter 3. Ethics
Chapter 7. Team Building
Chapter 8. Communicating with Employees
Chapter 9. Selecting, Onboarding, and Developing New Employees (p. 153-163 ONLY)
Chapter 10. Accountability In the Workplace

Chapter 12. Motivating Employees
Chapter 13. Leading Change
Chapter 14. Ensuring a Harassment-Free and Respectful Workplace
Chapter 15. Workplace Safety, Security and Wellness
TITLE 19 RULES AND REGULATIONS OF THE STATE OF NEW YORK, PART 1264
Identification of Buildings Utilizing Truss Type Construction
Truss Identification Signs
BUFFALO FIRE DEPARTMENT: COMMUNICATIONS
<i>Only the following communications are INCLUDED:</i>
Communications #1 – Rules and Regulations
Communication #2 – Working Conditions
Communications #3 – Liquefied Petroleum Gases
Communication #9 – Sick and Injury
Communication #10 – Sexual Harassment Policy
BUFFALO FIRE DEPARTMENT: TRAINING MANUAL LESSONS
<i>Only the following lessons are INCLUDED:</i>
Lesson #2 – Fire Tools, Equipment and Uses
Lesson #4 – Fire Hose
Lesson #5 – Portable Ladders
Lesson #6 – Fire Service Hydraulics
Lesson #7 – Salvage
Lesson #8 – Fire Extinguishers
Lesson #16 – Foam
Lesson #17 – Hydrants
Lesson #19 – Ventilation
Lesson #20 – Forcible Entry
Lesson #21 – Evaluating the Fire Problem - Size-up
Lesson #23 – Fire Stream Placement
Lesson #24 – Driving Fire Department Apparatus and Vehicles
Lesson #32 – 120 Hour Mandated Training Procedures
BUFFALO FIRE DEPARTMENT: OPERATIONS MANUAL UNITS
<i>Only the following units are INCLUDED:</i>
Unit #1 – Incident Command System (1.0 – 1.8)
Unit #2 – Accountability System (2.0 – 2.16)
Unit #3 – Common Fireground Guidelines (3.0 – 3.7.4)
Unit #4.0 – Special Fireground Operations: High Rise (4.0.1 – 4.0.7)
Unit #4.1 – Special Fireground Operations: Light Rail Rapid Transit/LRRT (4.1.1 – 4.1.12)
Unit #4.2 – Special Fireground Operations: Gas Emergencies (4.2.0 – 4.2.7)
Unit #4.3 – Special Fireground Operations: Vacant Abandoned Building Procedures (4.3.1 – 4.3.9)
Unit #6.0 – LDH – Large Diameter Hose Guidelines (6.0 – 6.10)
Unit #8 – Communications Equipment and Guidelines: Communications (8.1 – 8.11)
Unit #9 – Respiratory Protection Policy (9.0 – 9.0.12)

External Source Purchasing Information

External Reference Source	Publisher	Ordering Information
Fire Officer's Handbook of Tactics (4 th Edition) ISBN-13: 978-1593702793	PennWell	http://www.pennwellbooks.com/fire-rescue/fire-strategy-tactics/fire-officers-handbook-of-tactics-4th-edition-audio-book-standard-format/
Brannigan's Building Construction for the Fire Service (5 th Edition) ISBN-13: 9781449688943 (hardcover) ISBN-13: 9781284136135 (paperback)	NFPA	http://catalog.nfpa.org/Brannigans-Building-Construction-for-the-Fire-Service-Fifth-Edition-P13864.aspx
Emergency Care (13 th Edition) ISBN-13: 9780134024554	Brady/Pearson	http://www.mypearsonstore.com/bookstore/emergency-care-0134024559 Candidates may also order by telephone by calling Brady/Pearson at 800-922-0579
Fire and Emergency Services Company Officer (5 th Edition) ISBN-13: 9780879395643	IFSTA	https://www.ifsta.org/shop/fire-and-emergency-services-company-officer-5th/36530
Effective Supervisory Practices (5 th Edition) ISBN-13: 9780873267748	International City/County Management Association (ICMA)	Candidates MUST order by telephone to purchase directly from ICMA. Call ICMA at 770-280-4171