Don McNea Fire School
www.FirePrep.com

Below are firefighter examination preparation strategies that will increase your chances of becoming a firefighter. We strongly suggest you take the time to review these strategies before you take an examination. These strategies have been developed by experts in the field who have helped thousands of firefighter applicants increase their score and land the best job in the world – the job of a firefighter!

TEST STRATEGIES

Developing Good Study Habits

Many people believe, incorrectly, that the amount of time spent studying is the most important factor in test preparation. Efficient study habits, not necessarily time, however, are the key to successful test preparation. Of course, all else being equal, the amount of time you devote to your studies is a critical factor; yet spending time reading is not necessarily studying. If you want to retain what you read, you must develop a system.

You must set aside time, preferably at a point in the day when you are most receptive to learning -- mornings for some, early afternoons for others, perhaps late at night for third group. A single, well-planned reading and question-practicing session of 1 hour will be more productive than several 15 to 20 minute sessions. Once you have made a commitment to yourself, stick to it.

Strategies Before the Examination

Many people believe incorrectly that the amount of time spent studying is the most important factor in test preparation. Efficient study habits, not necessarily time, are the key to successful test preparation.

1. Make sure you understand the meaning of every word you read. The ability to understand what you read is the most important skill needed to pass any test. Therefore, starting now, every time you see a word that you don't fully understand, write it down and note where you saw it.

2. Establish a regular study period that is convenient for you. This period of time each day should be devoted specifically to preparing for the examination. You should also consider what is the best time for you to study. Some individual's best study time is from 6:00 a.m.-8:00 a.m. For other individuals, it may be between 2:00 p.m.-3:00 p.m. For still others, an evening time may be better. The time you study is not important; the important thing is that you study daily.

3. Simulate examination conditions when studying. As far as possible, study under the same conditions as those of the actual examination. Eliminate as many outside interferences as possible, such as television, radio, or where conversations can take place. If possible, set up an area with a desk or table where you can sit and concentrate. For those individuals who are smokers, remember that during examinations, all smoking will be prohibited. This means that you will not be allowed to smoke for this entire 2-3 hour period. You should try eliminating smoking for 2-3 hour periods so that you will not have high anxiety or frustration from not smoking during the examination. Avoid the use of stimulants or depressants, either of which may affect your ability to think clearly during the test.

4. Read, study and take practice examinations alone. This is the time to find out what you don't know or understand, and the time to correct these weaknesses. Studying alone is the most effective way of learning; however, some people may need support. This support should take the form of a "study group," which meets periodically to review and clarify. If possible, the group should have from three to five serious students and should meet for 2 to 3 hours on a periodic basis, perhaps every other week.

5. Study without interruption for at least 30 minutes, preferably 60 minutes. Study periods should not be less than 30 minutes. It is essential that you learn to concentrate for extended periods of time. The actual examination takes anywhere from 2 to 3-1/2 hours to complete, and you must concentrate just as hard in the third hour of the test as you did in the first hour. Therefore, as the examination approaches, study without interruption for extended periods of time.

6. You will find that most of these practice examinations have a 2-3 hour time limit. You should build up to concentrating for these extended periods of time. If the examination is 3 hours, you want to be just as sharp at the end as you were at the beginning. We suggest taking some type of snack with you, to eat after the second hour of testing, to keep your blood sugar up. This will increase your concentration level and keep you from becoming drowsy.

7. Exercise regularly, and stay in good physical condition. People who are in good physical condition have an advantage over those who are not. It is a well-established principle that good physical health improves the ability of the mind to function smoothly and efficiently, especially when taking examinations of extended duration.

8. Finally, it is important that you receive an adequate amount of rest, not only the day before the examination but also for the preceding period. If you are used to going to bed at 11:00 p.m. and getting 7 hours of sleep, do so. Do not think that if you go to bed at 9:00 p.m., those extra two hours will help you. More than likely, you will wake up two hours earlier and this will cause you more anxiety and a tendency to be more tired during the examination.

FINAL DAYS BEFORE THE EXAMINATION

Diet: Try to eat foods high in carbohydrates to give you energy for the examination. You will be nervous the day before and the day of the exam; much of this nervousness and high anxiety will cause you to use up energy. The night before the exam it is a good idea to have a pasta dinner to load up on carbohydrates to give you the needed energy for the test. On the day of the exam, eat a good breakfast, but do not overeat.

It is a good idea to have someone call you to make sure you don't oversleep the morning of the exam. If you have a friend who is also taking the exam, you should follow each other. This gives you some insurance; in case your car would break down on the way to the exam, you could ride along with your friend and still arrive at the examination on time.

ARRIVING FOR THE EXAMINATION

Make sure you know the exact location of the examination. It is a good idea to do a test run to find out the time frame it will take you to get to the examining site. Remember that if it is a weekday and the examination is at 9:00 a.m., you will have to factor in rush hour traffic. Remember it never fails that someone else will get in an accident the day you are taking your examination. Allow yourself at least an additional 45-50 minutes if you will be driving at a busy time period. You should arrive at the examination site at least 30 minutes ahead of time. This gives you adequate time in the event of any problem. Bring along the strategies in this booklet or, if a study guide is provided, review some of the information in this extra time.

AT THE EXAMINATION

Don't forget to bring your application form, if needed, and your driver's license.

Many examinations are held in large auditoriums or halls. These halls are usually chilly; it is a good idea to bring a light sweater or sweatshirt with you that you can put on during the test if you get cold. By arriving

early, you will feel more comfortable with the area you will be sitting in as opposed to rushing in at the last minute.

Bring two No. 2 pencils with you to the exam. Most examinations will have pencils available, but it is a good idea to have extras in case one breaks.

Upon arriving, give yourself a chance to relax. Take 4-5 deep breaths, slowly, to help you release any anxiety you may have. If during instructions for the examination you cannot adequately hear, inform a test monitor of the situation. You may be able to move to a better location.

BATTLING TEST ANXIETY

Knowing what to expect and being prepared for it is the best defense against test anxiety. Practice and preparation keep you from succumbing to test anxiety. Even the brightest, most well-prepared test-takers may suffer from occasional bouts of test anxiety.

Relationship between Anxiety and Peak Performance:

Low anxiety = low performance
Moderate anxiety = high performance
High anxiety = low performance

The key to success will be to control the level of anxiety.

How to Control Your Level of Anxiety:

1. Preparation
2. Practice
3. Try to relax yourself before the exam
4. Deep breathing (usually 4-5 slow, deep breaths)
5. Do easy questions first to give you confidence

Have a Positive Attitude

Keep reminding yourself that you're prepared.

- I've prepared for this test.
- I know exactly what to do.
- I know that I am going to score high on this exam.

If You Lose Your Concentration

Put your pencil down, close your eyes, and take a few deep breaths. This 10 or 15 seconds is really all the time your brain needs to relax and get ready to focus again. Try this technique several times in the days and weeks before the test when you feel stressed or anxiety. The more you practice, the more confident you will be on test day.

If You Freeze

If you freeze before you ever begin the test, here's what to do:

- Take a little time to look over the test.
- Read a few of the questions.
- Decide which ones are the easiest and start there.

The Final Element: Confidence

It is essential to develop unshakable confidence that if you follow the steps outlined above, the level of anxiety will be controlled with best possible performance resulting.

Your beliefs about something create expectations about how a situation will play out. For example, if you believe you are not smart, don't know the information well enough, or aren't capable of performing well on exams, then your expectations will be for failure. Negative expectations then create anxiety and the anxiety will disable you from actually doing well.

Therefore, if you believe in yourself and your abilities, and thus have positive expectations for how you will perform on the exam, you may negate most of the anxiety. A small amount of anxiety is helpful for performing well!

1. Read the directions carefully or listen closely to the instructor if directions are given orally. If you are unsure of any of the directions, raise your hand and at most exams a test monitor will come over and explain it to you. You should note particularly whether the directions differ from one section of the examination to another. If you, pay special attention.

2. Make sure you have all the pages in the examination. In most examinations you will be told the number of pages in your booklet; check to make certain that you have all the pages or sections. If any page is missing, inform the test monitor immediately.

3. Take a close look at the answer sheet when you are given it. Make sure that you are aware whether the numbers are vertical or horizontal. You don't want to find out that you have been answering the questions on the wrong numbers.

4. Make sure that you are marking the right answer to the right question. All it takes is skipping one question and not skipping the corresponding number on the answer sheet, to cost you the examination. Every 5 questions or so, it is a good idea to take a look at the number in the test booklet and the number on your answer key to insure they match.

5. When marking your answers, make sure that you mark only one answer for each question. Do not make exceedingly large markings on your answer sheet; most of these examinations are graded by computer. If the marking is too close to another marking, it will be double keyed and you will lose credit for that question.

6. If you need to erase an answer, be sure you erase it completely. Do not leave any shadows that could possibly show up when the computer is grading the examination.

7. Pay attention to key words that often show incorrect answers. Absolute words such as: never, not, nothing, nobody, everyone, everybody, are very difficult to defend in an answer.

8. Always read all the choices before you select an answer. Don't make the mistake of falling into a trap when the most appealing wrong answer comes before the correct choice. Read all choices!

   Your first "hunch" is usually correct. Many of us have a first impression, choose an answer, and then, upon reflection, go back and change the answer. A "feeling" that a particular alternative is right has some basis. It is simply that your brain made rapid connections. You came to an immediate conclusion based on your stored knowledge and your experience. The fact that you did not go through the logical steps of arriving at the correct solution does not indicate that your choice is wrong. Research studies have proven that these first impressions are probably correct.

Frequently, the most comprehensive answer is the best choice. For example, if two alternatives seem reasonable but one answer includes the other (i.e., it is more detailed, extends the first, or is more comprehensive), then this answer would be the best choice.

9. If you come across a question during the examination that you find difficult, don't allow more than two minutes on it. Skip over the question and leave a mark on your answer key. Do not mark in the area where you will be answering; mark to the left of the number so that you know to come back. If is also a good idea, if you are allowed to mark in your test booklet, to mark out choices you have eliminated as being incorrect. This allows you, when you come back at the end of the test, to go back to only the choices remaining when you are seeking the best answer.

10. Check the time during the examination. For example, if there is a 200 question test and a 3 hour time limit, you should be on question 100 with 1-1/2 hours left. You should check the remaining time every 10-15 minutes to insure you are on an appropriate time frame.

11. Do not change answers. Once you have read a question and chosen an answer, leave it alone. Do not go back and change the answer unless you are absolutely certain that (1) the answer you first chose is definitely wrong and (2) the new answer choice is definitely correct. Most of the time, when an answer is changed, it is changed from right to wrong. Your first answer is likely to reflect knowledge you have but are not entirely conscious of; your "intuition" is guiding you where your memory is dim. It is like when you can recognize whether a certain phone number is correct although you could not remember the number purely from recall. "Recognition" is easier than "recall." And not all recognition is completely conscious or vivid. To "vaguely recollect" something is quite normal; to change the answer later is <u>risky business</u>. The only other time you should change an answer is if you have miskeyed an answer. (For example, you intended to mark "C" and you inadvertently marked "B".)

12. Rules for making an educated guess - to be used only as a last resort. Your chances of choosing the correct answers to questions you are not sure of will be significantly increased if you obey the following rules:

    - Don't reconsider answer choices that you have eliminated.
    - Be aware of key words that give you clues to the correct answer.
    - If two choices have conflicting meanings, one of them is probably the correct answer. If two choices are very close in meaning, probably neither is correct.
    - The choice that contains significantly more or significantly fewer words than the other choices is very often correct.
    - If all else fails, and you have to make an outright guess at more than one question, guess the same lettered choice for each such question. The odds are that you will pick up some valuable points.

THE ART OF EFFECTIVE TEST TAKING

Test-taking ability can be divided into three categories: mastery of basic knowledge and information; awareness of test-taking techniques and strategies; and, finally, freedom from anxiety that, if present at a high level, will interfere will application of both of the other categories.

Understanding the Question

The question is called the **stem**, and the answer choices are called **distractors**. The purpose of distractors is to distract you from identifying and choosing the correct answer. Thus, in the process of taking a multiple-choice test, all of your knowledge, expertise, and judgment are utilized.

In effective test construction, the stem is direct and to the point. This means that the question is asking for one particular response and that you should **not** read other information into the question. Often, you will find questions that are asking for "common sense" answers. Reading into these questions or searching for subtle hidden meanings is not advised. **Principle: Do not read extra meaning into the question; assume it is direct and to the point.** Your first action then, upon being presented with the question, is to ask yourself "What is this question asking?" Look for key words or phrases to help you understand. It is important to have the central point clearly in your mind before going on to consider the distractors.

Make very sure you read the stem correctly. Notice particularly the way the question is phrased. Is it asking for the right or wrong response? One of the most important principles in test taking is understanding what the question is asking. **Principle: Understand exactly what the stem is asking before considering the distractors.**

Another technique for assessing the stem and interpreting the question correctly is to rephrase the question so that it is very clear in your own mind. For example, consider the following statement: "The one treatment that is not required in cardiogenic shock is..." Rephrase it to read: "They are asking me to identify a treatment that is not required in cardiogenic shock, but may be required in other shock conditions." Rephrasing in your own language can assist you to read the question correctly and, in turn, choose the appropriate response. This is particularly important when you are faced with a difficult and/or confusing question. **Principle: Rephrase the question in your own words so that it is clear in your mind.** If possible, think of the correct answer before considering the distractors. If you do not know the answer, the following cues to working with distractors may prove helpful.

Distractors are various alternatives chosen to be as close as possible to the right answer. In good test construction, all distractors should be feasible and reasonable and should apply directly to the stem. There should be a commonality in all of the distractors. If one distractor is off base and not plausible, then you can safely assume the person writing the test question ran out of reasonable distractors. **Principle: When analyzing the distractors, isolate what is important in the answer alternatives from what is not important, relative to the question.** In other words, all distractors may be correct but not the right choice for the specific question that is asked. One method of helping you choose the correct answer is to ask yourself whether each possible alternative is true or false in relation to the stem. Asking yourself which distractor is true or false is a shortcut method of answering the question. It forces you to keep looking at the stem. Otherwise, you are trying to judge all of the choices at once. After you have completed the true-false process, remember to go back to the stem and ask yourself if your choice is, in fact, answering the question.

An answer alternative may be correct as it stands by itself, but wrong in terms of what the question is asking. Many, many students fail to recheck the answer with the stem, and they answer the question incorrectly. **An effective strategy in assessing test questions is to judge all four alternative choices against the stem, not against each other.** Read the stem, then check Alternative A against the stem, then check Alternative B against the stem, and so on. This process will eliminate choosing an alternative that does not fit the question. **Principle: After choosing the correct answer alternative and separating it form the distractors, go back to the stem and make sure your choice does, in fact, answer the question.**

If you are answering a test question in which one distractor is considerably different from the others, it is probably not the correct choice. Often, students tend to pick this alternative just because it is different. **Principle: Look for similarities in two or three of the choices remembering that the purpose of distractors is to divert you from the one right answer.**

The multiple-variable question is one in which each possible answer to the question includes several variables. An effective technique for handling multiple variables is to use the process of elimination. First, study the question and ask yourself what variable fits with this condition, or, after examining the distractors, underline the variable that you know is correct. Now ask yourself what variable is not present with this condition. Again, examine the distractors and cross out those variables which are incorrect. By this process, you probably will have eliminated at least two distractors even without taking the time to consider the other two. **Principle: When a question contains multiple variables as alternative choices, use the elimination-of-variable technique.**

TEST TAKING TACTICS: EVALUATING ANSWER CHOICES

Answer on the basis of the information given in the question. When answering test questions, you must base your answer solely on the information contained in the test question. The test for a Firefighter requires no previous knowledge of the job. The test questions do not have to reflect the way the job is really done or the actual procedures of the Fire Department.

Although the test requires no previous knowledge, some knowledge of Fire Department procedures, tools, tactics, etc., is likely to help a person do well on the test, because most questions are based on actual policies or practices. These classes will give you familiarity with some common tools and procedures.

Problems arise when a person who is familiar with procedures of the fire department encounters a test question based on something which contradicts actual practices. It is in this kind of situation which you must ignore actual practices and answer on the basis of what the test question says. For example, you might know that kitchen stove fires are usually extinguished with a portable fire extinguisher; but a test question might describe a stove fire being put out with a fire hose attached to a hydrant. In this kind of test situation, never mind the actual practice; go by the information in the question.

Tell yourself the answer to a question before you look at the answer choices. Sometimes the question is too vague for you to anticipate the answer ahead of time. But often the question stem is a question precise enough for you to answer it before you look at the answer choices. For instance, suppose you had studied the diagram of an apartment and then the question asked, "The most direct route from the dining room to the fire escape is...." You should be able to answer this kind of question in your head before you look at the four answer choices. If you answer the question in your head before you look at any of the four answer choices, you are more likely to get the right answer.

Remember that part of the test maker's job is to provide three false answers for every correct one. It is a multiple choice test, not a true/false test. A skillful test maker will offer you some false choices which seem pretty good in order to distract you from the correct answer. Among test makers these false choices are called "distractors." But if you have already decided what answer you should be looking for, you will not be distracted so easily by bad answers which might look pretty good and which come before the correct answer. A seductive (A) and a half-true (B) will not prevent you from reaching a correct (C) if you know what you are looking for.

Sort answers immediately into three categories. As soon as you read a particular answer choice, decide if it is True, False, or Uncertain. If you are quite sure than an answer choice is True, use your pencil to write a "T" in front of that answer choice immediately. But continue to read the other answer choices because you might find another True one and then have to make a final choice.

If you are quite sure that an answer choice is False, use your pencil to write an "F" in front of that answer choice immediately. You may find that an answer is False even before you have finished reading the whole answer. Stop reading it as soon as you are sure it is false and mark with an "F".

If you are Uncertain about whether a particular answer choice is correct, use your pencil to put a question mark (?) in front of that answer choice.

When you have finished reading all four answer choices, each one should be preceded by a "T" or an "F" or a question mark (?). If there is only one with a "T", that is probably your answer. If you have more than one with a "T", or a "T" and a question mark, you may need to think a bit before choosing your final answer. But you should not have to bother any more with answers you have given an "F" already.

Negative Questions: Using "T" and "F" to evaluate answer choices is better than using something like a check mark to denote a correct answer when it comes to answering negative questions. **Negative questions are questions which ask you to pick out an answer choice which is "<u>not true</u>."** If you are evaluating each answer choice one by one and marking each one "T" or "F", negative questions will be easy for you to handle.

Half-true Answers: Sometimes an answer choice really contains two different statements. For instance, an answer choice might say, "there is a bedroom on the right and the kitchen is on the left." Maybe it is True that "there is a bedroom on the right," but False that "the kitchen is on the left." With this kind of answer choice, put a slash mark between the two different statements, and write "T" or "F" over each separate part of the answer choice. But out in the margin write "F" since an answer choice must be completely True to be valid.

When it is difficult to choose between two answer choices, look back at the question stem. Sometimes there are two answer choices which both look good. Or maybe all of the answer choices look bad. **When you find yourself having trouble making the final choice of an answer, stop staring at the answer choices. Go back and look at the question stem and the information the question is based on.**

A skillful test maker tries to make two or three of the answer choices look very good. All the answer choices may contain some truth, which make them tempting. Or all may look wrong. But the test maker has to have put some detail into the "fact pattern" of the question to justify the claim that one of these answers is better than the others. If reviewing the answer choices themselves has not helped, the clue to which answer is correct is likely to be in the question stem or "fact pattern" rather than in the answer choices. So go back to the question stem and the fact pattern the look for the deciding factor.

Choose the best answer there. A very common problem for test takers is the problem of recognizing that the best possible answer to a question has not been included among the answer choices. None of the answer choices seems to be fully adequate to the situation. In part, this is often a result of the way multiple choice questions are constructed. The exam maker does not have to include all the correct procedures in answer choices; that might make for terribly long answer choices. Hence, some correct answers are only partial answers. Sometimes you will be given more than one partial answer and asked to choose which is the **best** among these. In this sort of situation, work at eliminating the answer choices which are definitely wrong or most seriously incomplete. For your answer choose the best one remaining after this kind of elimination process.

TEST TAKING TACTICS: WORD CLUES

With multiple choice questions, only one of the answers can be correct. If there are four choices, three must be wrong. An answer may be correct because it is precise or because it is vague. An answer may be wrong because it is too exaggerated or too restrictive. Consider the following question:

> A firefighter is required to wear the mask at any fire scene where there is a lot of smoke and whenever there is clear danger of hazardous chemicals in the air. If a firefighter's mask fails to work properly, the firefighter is to report this immediately to the officer in charge at the scene. The officer will usually order the firefighter to work off the immediate fire scene, such as at a hydrant. The firefighter may attempt to get the mask working properly and then request to be reassigned to the fire area.
>
> Based on the paragraph above, it would be most correct to say that:
> A) a firefighter should wear the mask only when there is a lot of smoke at a fire scene
> B) a firefighter must attempt to repair a mask which is not working properly
> C) a firefighter whose mask is not working properly will be assigned to work at a hydrant
> D) the firefighter whose mask has been repaired can be reassigned to the fire area

In the above example, certain key words are used to make answers right or wrong. The A) choice is wrong because it contains the word "only." Without "only" A) would be a correct answer. The B) choice would be correct if it said "may" instead of "must." The C) choice is wrong because it says "will." The C) choice would be fine if it said "may" instead of "will." The D) choice is correct; it only says "can." The D) choice would be wrong it if said "must" instead of "can."

When evaluating answer choices, the words to be on the lookout for are the little words which tend to either "harden" or "soften" statements. Words which **"harden"** statements, and make them difficult to defend, are strong words like: **all, every, always, will, must, certainly, invariably, surely, no one, ever, any, no matter, nothing, etc.** Words which **"soften"** statements, and make them easy to defend, are words like: **some, many, sometimes, may, possibly, generally, probably, usually, often, can, could, might, occasionally, etc.** Notice how these words appear both in the "fact pattern" and in the answer choices of the example.

There are times when a very "hard" statement can be a correct answer choice. For instance, in the example above, it would be correct to make up an answer choice which states, "If a firefighter's mask fails to operate properly at a fire where there is a lot of smoke, the firefighter must always notify the officer in charge." Do not automatically rule out "hard" statements, but be careful about accepting them.

Remember that the test maker must be able to defend the correct answer and defend the claim that the other three answers are wrong. **These little words which "harden" or "soften" statements often help to justify whether an answer is right or wrong.** (They also reflect the difference between prudent, reasonable statements and exaggerated or overly rigid statements.) Hence, be sensitive to these little words when you are reading questions and evaluating answer choices. **Get in the habit of using your pencil to underline or circle such words.**

TEST TAKING TACTICS: UNDERSTANDING THE TEST MAKER'S TACTICS

As a test taker, you will be more skilled if you know how a test maker thinks. Your test taking strategies must anticipate the test maker's strategies. With multiple choice questions, the problem for the test maker is to create three bad answers for every good answer.

To appreciate the test maker's problems and to improve your own ability as a test taker, you should practice making up a few questions yourself. Here is some material to work with. Below is a short reading passage from a Fire Academy training manual, followed by four answer choices. As it appears below, all the answer choices are correct. You should try to come up with some other answer choices which would be wrong, or make some little changes in these answer choices so that they are no longer correct.

> *Sometimes it is necessary to cut holes in the roof or floors of a building to release bottled up heat and smoke. During roof or floor cutting operations, everyone in the vicinity of a saw in operation shall observe, as near as possible and practical, a 20 foot radius Circle of Danger. Only the Officer, the Operator and the Guide Man may enter this circle. All persons directly to the rear of the operating saw blade must be warned away, as the saw may throw debris 20 feet or more.*
>
> *Side pressure or twisting of the blade when operating should be avoided. The saw should never be forced. If too much pressure is applied to the blade, the hazard of blade breakage (carbide tipped) or blade shattering (aluminum oxide or silicon carbide discs) is increased. A blade which breaks or shatters during cutting may cause serious injury to the Operator or others in the area.*
>
> *Based on the information above, it would be most correct to say that:*
>
> *A) No one should be within 20 feet of the operating saw except the Officer, the Operator and the Guide Man.*
> *B) Even someone who is 20 feet away can be in danger if the person is directly behind the saw when it is operating.*
> *C) Carbide tipped blades will break, not shatter, if too much pressure is applied.*
> *D) Side pressure may cause shattering of the blade if the blade is an aluminum oxide or silicon carbon disc.*

No doubt, you can think of many ways to make three of the above answer choices wrong. But you probably would not want to make an answer choice so obviously wrong that no one would ever choose it. There is no point making up answers if no one will choose them. The idea is to make an answer wrong, but still give it some appeal so that it will be an effective "distractor" from the right answer. Here are some test maker tactics for doing that.

1. **Overstate the point.** In the example, you could change 20 feet to 25 feet. Or you could say that side pressure will definitely or always cause the blade to break or shatter. Or you could insist rigidly on the 20 foot circle, forgetting that the rule says, "as near as possible and practical." Of you could say that the Officer must be in the circle instead of that he may be in the circle.
2. **Ignore the fine points.** In the example, you could substitute something general like "a safe distance" for the exact rule of 20 feet. Or you could ignore the detail that 20 feet may not be adequate for someone directly behind the saw. Of you might overlook the fact that these rules apply only when the saw is actually in operation.

3. **Change just one detail.** In the example you could switch "breaking" and "shattering" for the different kinds of blades. Or you could switch the kinds of blades. You could change the rule about people directly behind the saw to make it people directly in front of the saw.
4. **Provide some bait to make false answers attractive.** An easy way to do this is to keep some exact words from the "fact pattern" in the false answers. Another way to do this is to make a two part answer; start with something that is correct, then add something which is wrong. For the example, you might say, "Other firefighters should remain at least 20 feet away when practical, and the Operator should especially warn anyone directly in front of him."
5. **Twist the meaning around.** In the example you could say that the saw operator must go at least 20 feet from other people instead of the rule that other people must keep 20 feet from the saw operator. Or you might try saying that the saw cannot be used less than 20 feet from the edge of a roof.

TEST TAKING STRATEGY FOR VISUALIZATION

Visualization is the ability to picture a scene or object in your imagination. It includes the ability to picture changes in that scene or object. This type of test question asks, "Can you imagine...?" It is a test of your imagination. It requires you to think in pictures. If you have read a lot of comic books in your childhood, you may be quite skilled at thinking in pictures. In fact, if you think of yourself as an illustrator whose job is to provide pictures to illustrate written materials, you will find these questions easy to handle.

Often the key to a Visualization question is noting direction accurately: North, East, South and West. When direction is part of the material, put the traditional symbol on your drawing with North in the twelve o'clock position. Focus your attention on unchanging parts. Viewing objects from the opposite side reverses location of all parts of the object.

TEST TAKING STRATEGY FOR SPATIAL ORIENTATION

Spatial Orientation questions measure your ability to keep a clear idea of where you are in relation to the space in which you happen to be. You will be given diagrams and asked to answer questions regarding that defined space. The diagrams or maps used for Spatial Orientation questions are somewhat similar to materials used for Memorization or Visualization questions. But the Spatial Orientation materials tend to be more complex, and the questions tend to emphasize either where you are in a diagram or how to go from one spot to another on the diagram or map.

Spatial Orientation questions may be based on diagrams on buildings, outdoor areas, or any other "space" in which you might happen to be as a firefighter. These are not timed questions. You will probably be allowed to use your pencil to write on the diagrams or maps as a way of testing your answer choices, since these are not Memorization questions. (If you are forbidden to write on the question paper, you can still use the eraser end of your pencil or your finger to trace things on the question paper, or use scrap paper, if provided.)

When using your pencil to write on a diagram or map, be sure to write lightly. Erase any of your jottings which do not work out or are no longer needed. If there are several questions based on the same diagram or map and you have made pencil markings for them, the diagram can get quite confusing as a result of your markings. Hence, you should erase your markings as soon as you are done with them, if there is another question to be answered on the basis of the same diagram.

Many diagrams or maps use symbols. Look at the whole page to see if there is a key to symbols. For instance, a note at the top or bottom of a diagram might indicate that a tiny circle represents a fire hydrant; a circle with a letter in it might represent the location of a firefighter in the diagram. An arrow may indicate what direction something is moving in. A dotted line may indicate movement of something or someone from one position to another position in the diagram or map. Be sure to look for a key to symbols. An important

feature of many diagrams and maps is the direction of North, East, South and West. Look for a symbol to indicate directions.

Often questions are based on phrases like "to your left" or "to your right" or "to the left of the rear entrance." The test maker often approaches a diagram or map from the side or from the top, so that "left" and "right" do not correspond to where you are sitting in relation to the diagram. Just turn the test paper sideways or upside down when figuring out the answers to such questions. Turn the diagram or map so that "left" or "right" on the map is the same direction as your left or right hand.

TEST TAKING STRATEGY FOR MEMORIZATION

The Memorization part of a test will be administered first. The first test book you receive on the test day will contain the material to be memorized. It will be in a separate booklet; you will be told not to open the booklet until you are instructed to do so. You will not be allowed to have a pencil in your hand when memorizing.

After you are instructed to open the Memorization booklet, you will be given five minutes to memorize its contents.

When the Memorization time is up, the booklet will be taken from you. Then you will be given another five minutes to think about what you saw. The first questions in the test booklet will be related to the Memorization materials. You should answer these questions at once, while your memory is still fresh.

The normal process of collecting the Memorization booklets and distributing the test booklets will interfere with your memory. You must reduce this interference to a minimum during this time by staying calm, ignoring everything around you, keeping your attention focused on your memory even if this requires you to keep your eyes closed most of the time, and rehearsing in your mind the things you have memorized.

No matter whether the Memorization material is words, a diagram, or pictures, the same basic memory techniques will be useful. These techniques can be summed up in

The S P A C E Technique

S **Select key information.** You probably do not have enough time to memorize every word or every squiggle on the page. Memorize what seems to be important. **Memorization questions will focus on what would be important in a real job situation.** For instance, at a fire scene the locations of doors, windows and fire escapes are important.

P **Picture things and events and persons in your mind.** Close your eyes for a few seconds and form a mental picture of things, people or events which are being described. The brain words more efficiently with pictures than with words. If you are memorizing some kind of scene, imagine yourself taking a walk through it from one end to the other.

A **Arrange things and events in some order in your mind.** Information which is grouped in some way or in some order is easier to remember. Count things, e.g., 5 people, 3 doors and 7 windows. **For picture material, draw two mental lines through the picture to divide it into quarters, then note what is in each quarter.** Notice what is next to what, what is above or below.

C **Compare things.** For a picture or diagram, compare the contents of each quarter of the drawing. If there are several items you may have to distinguish from one another (like rooms in a floor plan, or faces or diagrams of two different pieces of equipment) compare them to one another as you are memorizing. Making comparisons helps you become more conscious of details.

E **Exercise your memory.** Go back to a section of a picture you already memorized. Repeat items to yourself. Repeat them. Repeat. Go back and repeat again.

Technique: **Test your memory continuously.** As you memorize more information, keep checking that you remember what you already worked on. Keep testing yourself. **You can test yourself by asking over and over something like the 4 W's if it is a story: Who? What? When? Where? If it is not a story, you may be asking yourself: What? Where? How many?**

Fingering the Information. During the Memorization part of the exam you will not be permitted to hold a pencil in your hand. But your fingers will be not taken away from you. Your index finger will assist you in remembering.

Use your finger to circle, trace, underline, poke at, or emphasize in any way the important details. Information in picture form should be literally traced with your finger. With a floorplan or diagram of a building layout, "walk through" it with your finger, taking note of important items. Fingerwork will reinforce what your eyes see. When you are doing this sort of fingerwork on a test, it may look weird to somebody else, but being odd in this way may help you get the job.

TEST TAKING STRATEGY FOR INFORMATION ORDERING

Questions based on Information Ordering measure your ability to apply rules to a situation for the purpose of putting the information in the best or most appropriate sequence.

The secret of success in answering questions based on Information Ordering is to be extremely rigid in your thinking. These questions are based on the premises that:

1. **There is only one correct order of things or sequence of steps.**
2. **Every step must be followed in its proper order.**
3. **No step may be skipped or omitted.**

Strategies:

1. **Put in order only as much information as you need to answer the questions.**
2. **Examine alternatives only as far as the point where you find it to be definitely wrong.**
3. **If you are not sure which item should be placed first in the list, determine which item is last.**
4. **Go by what you do know for sure.**

One example would be the rules for entering a person's name on a report form. The form may indicate that one should begin by entering the person's family name, then the person's first name, then middle initial. Given these rules, it would be an error to start with the person's first name. It would also be an error to write out the person's middle name, since the rule calls for only the middle initial.

Another example would be a procedure that tells you to inspect a building by checking the cellar first, then the floors above one by one beginning with the first floor, then the fire escape, and finally the sprinklers if there are any. Given this statement of the procedure, it would be an error to do the easy thing by inspecting the cellar and then using the cellar exit to the back yard to inspect the fire escape before going up to check the first floor. It would also be an error to inspect the sprinklers at the same time as you are inspecting each floor. Although a procedure may seem silly to you, there may be technical reasons which justify the procedure. Stick to the procedure given in the question.

Standard procedures are used to ensure that nothing is overlooked due to lack of systematic approach. On a fire scene standard procedures also help a superior to keep track of where Firefighters are at any given moment. At least on an exam, it is an error to modify a procedure. Sometimes a test maker will create a false choice which would be a change in the procedure but seems to make a lot of sense. **Do not fall for this kind of false answer! Adhere strictly to procedures.**

Questions on procedures can be difficult when the procedures list exceptions or include "if's". For example, a procedure may require firefighters to turn off all hydrants when they are not being used by the fire department, except when certain hydrants have been equipped with spray attachments and are being used by children playing on the street in the summertime. Another example might be a procedure that says a firefighter should break a window if smoke is building up inside a building; if there is no build-up of smoke, this procedure would not call for breaking a window. Hence, it is important to take note of any "if's" in procedures and to be aware of any exceptions to procedures which are stated on the exam itself.

TEST TAKING STRATEGY FOR READING COMPREHENSION

Since your exam will be a written one, not an oral one, your verbal comprehension will be measured only by means of reading comprehension. Hence, as far as your exam is concerned, **verbal comprehension measures your ability to read and understand the types of written materials that a firefighter might be expected to read on the job.** You will be presented with a reading passage and then asked to answer questions about the passage. All the information needed to answer the questions will be included in the passage itself.

In answering the questions based on the reading passage, it is important that you answer the questions only according to the information given in the passage. If you have information from your own experience and knowledge, you should not use it to answer a question of this type. Even if you think that there is a mistake in the reading selection, you must still answer the question on the basis of the information given in the reading passage.

The kinds of Reading Comprehension questions which appear on a civil service exam tend to be somewhat different from the reading comprehension questions on a school related exam. That is because there are different kinds of reading--skimming, reading for general understanding, reading for details, etc. Your exam will be based mostly on reading technical materials, not anything like a novel or essay. Hence, your exam will have more focus on exact grasp of details.

There are certain techniques that will help you do well on reading comprehension questions. Here is a summary of the most important techniques.

Use your pencil. To begin with, use your pencil as a pointer. Using the pencil to guide your eye along a line of text helps you to focus on the details in the reading; it holds your attention to the precise words in the passage. In a long test, attention may weaken. Fatigue may blunt your attention to details. But using your pencil as a pointer will help to preserve your attention to details.

Another benefit of using the pencil as a pointer is that it will probably speed up your reading. The steady flow of the pencil across the page with each line of text draws they eye along at a steady pace. Do not go faster than you can grasp the text, but do try to keep your reading going at a steady pace set by the pencil.

Circle key words and phrases. In a Reading Comprehension test you are not reading for just a vague general understanding of the passage. You usually have to read for detailed understanding. There will be individual words which are important for grasping a point exactly. You do not want to write so much on a passage that it is hard to read a second time if you need to go back to check a detail. But you do want to circle key words or phrases which will enable you to zero in on precise points needed to answer a question.

Read short questions carefully the first time. When you are reading a short question for the first time, read it carefully. A short question is one that is only seven or eight lines long. You can retain all of the main ideas and remember where particular things are mentioned from one careful reading. Hence, you do not want to waste time reading this passage twice.

Besides wasting time, another bad consequence of reading a short question very carelessly the first time is that it may leave you with some false impressions of what you have read. Wrong ideas can get stuck in your head from a careless reading. Then it will be more difficult to get the correct answer.

For long questions, look ahead to see what is being asked. Take a look at the "stem" of the question, the sentence which precedes the answer choices. And look at the kinds of choices which are being offered. Sometimes reading passages are long but the questions are asking only for particular details. In that case you can often skim a long passage to find the particular detail.

Keep forging ahead. Do not get bogged down if there is a word or sentence you do not understand. You may get the main idea without knowing the individual word or sentence. Sometimes you can sense the meaning of the word from the context. Sometimes the word or sentence may not be the basis of any question. If there is some idea you need to answer a question but do not understand, read it one more time. If you still do not understand it, move on. You can come back to this question later if you have more time at the end of the test.

Picture what you read. Try to form a picture in your mind as you read. School books used to teach reading contain many pictures because pictures aid comprehension. When reading material without pictures, it will aid your comprehension if you use your imagination to picture in your mind what you are reading. Read as if you were a professional illustrator who has been hired to do an illustration for the passage.

Ask yourself questions as you read. When you finish reading a sentence, ask yourself what the author was saying. At the end of a whole paragraph, ask yourself what the point of the whole paragraph was. If you ask yourself questions, you will find that you are paraphrasing the passage in your mind. That will help your understanding.

Know where the author stands. Sometimes a passage will contain an evaluation of some ideas of tools or procedures. The author may want to make the point that certain practices or procedures are bad or that certain tools may not be right for a particular job. Be sure you know if the author is accepting or rejecting something.

TEST TAKING STRATEGY FOR PROBLEM SENSITIVITY

Problem Sensitivity measures your ability to recognize or identify the existence of problems. You will not be tested on the ability to solve the problem, only the ability to identify or recognize it.

For the purposes of the firefighter exam, Problem Sensitivity questions are somewhat similar to Deductive Reasoning questions. The Deductive Reasoning questions start with a rule. The Problem Sensitivity questions tend to start with a description of some general practice among firefighters. Then the question asks you what might be the best reason for that common practice. For example, a question might start by telling you that firefighters wear helmets made out of hard leather, not metal or plastics. The answer choices might give various possible reasons for this, e.g., it is lighter, it is less costly, it is less likely to get hot or melt. You must pick the answer which gives the best reason for the practice.

Problem Sensitivity is only the ability to recognize a problem, not the ability to solve it. You will not have to pick the best solution to a problem. The solution is already stated in the "fact pattern" or "stem" of the question. The answer choices are simply reasons which might support that solution.

Problem Sensitivity questions will be easier to answer if you keep in mind the main goals of firefighting. You probably realize that most fire departments officially state that their purpose is to "protect life and property." Sometimes "life" is more fully stated as "life and limb." The idea behind protecting "life and limb" is to keep people from being killed and, furthermore, to keep them from being seriously injured.

Protecting life and limb is more important than protecting property, and so is stated first. The purpose of a fire department is to protect "life and property." In other words, the safety of people is more important than protecting property.

A fire department is also expected to operate efficiently. Being efficient is important in any kind of work, but is less important than protecting life and property. Hence, if we list the goals of a fire department in the order of their importance, the list would be:

1. **Safety**
2. **Protecting property**
3. **Efficiency**

It is important to note that no value is given to personal gains or benefits. Personal gain or benefit is not a good reason for doing anything, so far as a civil service exam question is concerned.

As the list of goals suggests, the best reason for anything is Safety. If safety is a real issue in the "fact pattern" of the question, then safety is the best reason to justify any practice.

But sometimes there is no real issue of safety. No one is seriously endangered at the moment. In that case, the best reason for any practice is the fact that it is necessary in order to protect property. However, "property" includes fire department property--firehouse, fire engine, tools, etc. Property can be sacrificed when safety is at stake. But if there is no real threat to safety, one must protect property.

If there is no real question of safety and no real threat to property in the situation, then the best reason for doing something is that it is efficient. If several answer choices are based on efficiency, you will be judging which answer choice would really be more efficient.

Any answer which suggests that something should be done because it will bring praise or benefit to the firefighter is not likely to be a correct answer to a test question. Financial benefits to other people are not usually good enough reasons either. Likewise, an answer choice which tries to justify something only on the grounds that it will make the fire department "look good," is not likely to be a correct answer. Being good will always be a better reason than looking good. And financial benefits to anybody are not usually good enough reasons for fire department practices.

Remember that reasons must be realistic. To justify a practice on the basis of Safety, there must be something in the question situation to support the idea that Safety is at stake. Similarly, a proposed answer based on efficiency should really have the appearance of being possible and efficient. Forest fires can be brought under control to some extent by dropping chemicals on them from planes, but it would not be practical to try chemical bombing of a burning house.

It is especially with these questions about the best reasons for doing things that you may find it difficult to choose between some of the answer choices. Problem Sensitivity deals with more ambiguous problems than other kinds of questions. But there is an old test taking strategy which may help you here. You should remember that, in a sense, it is ultimately the Mayor or the Fire Chief who is testing you for the firefighter job. **When faced with difficult choices on a question of this type, imagine that the question is being asked personally by the Mayor or Fire Chief. Choose the answer you would give to the Mayor or Chief in face to face questioning.**

TEST TAKING STRATEGY FOR INDUCTIVE REASONING

There are many different kinds of reasoning. Some reasoning is by simple association. If you see very dark clouds coming you way, accompanied by lightning and thunder, you will probably conclude that it is going to rain, even if you do not understand the scientific explanation for rain. By experience you have learned to associate such dark clouds with rain. By experience a fire marshal may associate a fire in the ceiling of a vacant top floor apartment of a tenement house with arson. This kind of reasoning by association requires some knowledge or experience.

Another kind of reasoning is by comparison. Much of the "legal reasoning" done by a lawyer consists of comparing a case with other cases which have already been decided by the courts. When a firefighter is able to predict that a building will collapse during a fire, it is often by comparison to other fire scenes in which buildings have collapsed; it may not be possible to do a scientific evaluation of the situation at the moment.

Your firefighter exam will include three kinds of mental abilities related to reasoning. These are three kinds of reasoning which do not depend heavily on prior knowledge or experience. They are: inductive reasoning, deductive reasoning, and problem sensitivity.

Inductive Reasoning measures your ability to determine a rule or concept which fits specific situations. You will be given specific situations and then asked to determine the general concept which links or explains the situations.

Inductive reasoning is reasoning which goes from particular facts to a general conclusion. It starts with a number of particular facts. For example, a question may begin with some facts about fires and try to draw general conclusions.

For Inductive Reasoning questions, the answer choices are the general statements. You must test them one by one against the particular facts provided in the question. The facts may be statements. Or the facts may be data from a table. If you need to do some counting, you should write tallies or little notes. If you fail to take notes, you may end up with a few possible answers and not remember all the details; then you will have to start counting again! It will save you time in the long run to take notes the first time you evaluate an answer choice.

A problem with inductive reasoning is knowing how many particular facts are needed to support a general statement. It would not be inductive reasoning to jump from a single particular fact to a general statement. At least a few particular facts are necessary before a general statement can be made. For instance, in reality no one would make a statement about when certain kinds of alarms occur on the basis of data from only one night's alarms. However, there are practical limits to how much data can be put into a test question. You should pick the answer which is supported best by the limited data in the question itself.

Inductive Reasoning questions can take a lot of time. If you have several questions on the same set of data, it may be worthwhile to work out the answers immediately. But if there are a lot of data and there is only one question based on the data, you may want to skip this kind of question and come back to it at the end. Do not get bogged down when there are still lots of other questions to answer.

TEST TAKING STRATEGY FOR DEDUCTIVE REASONING

Deductive reasoning measures your ability to apply general rules or regulations to specific situations. You will be presented with general Fire Department rules and regulations and then asked to apply them to specific situations.

Deductive Reasoning is the opposite of Inductive Reasoning. Deductive reasoning starts with a general statement. In Deductive Reasoning you go from the general statement to a particular fact or conclusion.

The Deductive Reasoning questions on the firefighter exam will not be such a rigid exercise in logic. They will deal with situations more complex than the neat world of geometry. But the Deductive Reasoning questions will follow the basic pattern of going from general statements to conclusions. In the "fact pattern" or "stem" of the question, you will find the general statement. It will be some kind of rule. The answer choices will be specific actions. One of them should be a valid example of how that rule would be applied in a concrete situation.

For instance, the question could state a general rule that fire trucks should not be positioned so close to a fire that they could be damaged by flying debris or heat from the fire. The question might then give a description of a fire and tell you what direction the wind is blowing towards. Then the question may ask you what side of the fire the truck should be farthest from. In evaluating the individual answer choices, you should be asking yourself, "Is this an accurate example of the general statement?"

When answering questions like these, pay attention to any limits or exceptions to the rule. The rule may be in effect only at certain times or under certain circumstances. For instance, a rule might apply only when there are several fire trucks at a fire scene. Or a rule might apply only at night, not in the daytime. And watch out for exceptions. A rule might apply to most firefighters but not to those assigned to certain duties, e.g., all firefighters might be required to wear a uniform, but fire marshals might be an exception. A rule might apply all the time but still with exceptions, e.g., a rule might forbid using the fire truck to go out to purchase food for the meal in the firehouse but it might be allowed to stop for food on the way back to the firehouse from other duties. **So, you need to be asking yourself:**

1. **Are there are limits to when the rule applies?**
2. **Are there any limits to who is covered by the rule?**
3. **Are there any authorized exceptions to the rule?**

If there are limits or exceptions to rule, you may find them highlighted by certain words in the question. **The usual key words to denote exceptions to rules are: except, unless, and if or when...** Circle or underline these key words when you are reading rules.

Apart from authorized exceptions stated in the question itself, do not make exceptions. Your task is to apply the rule, not to question it or excuse anybody from following it. In picking answer choices, apply rules rigidly.

As far as the firefighter exam is concerned, Deductive Reasoning is somewhat similar to Information Ordering. But Information Ordering has more to do with following, in proper order, step by step procedures. Deductive Reasoning is more the ability to recognize a correct concrete example of a general rule.

Additional Strategies:

1. **Pay attention to steps which may be taken in definite order.**
2. **Pay attention to when the rule or procedure is enforced.**
3. **Pay particular attention to any exceptions.**