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ENTRY LEVEL FIREFIGHTER EXAMINATION ORIENTATION AND PREPARATION GUIDE

COMMONWEALTH OF MASSACHUSETTS
HUMAN RESOURCES DIVISION

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INTRODUCTION: THE WRITTEN EXAMINATION FOR FIREFIGHTER

This Guide has been distributed to help you prepare for the written portion of the Massachusetts Firefighter's Examination. This Guide covers the Written Examination. A Guide to the Physical Abilities Test (PAT) is available on the Human Resources Division (HRD) website at: http://www.state.ma.us/hrd/employment/EM_PAT/2002_Fire_PAT_prep_guide.doc.

The Written Examination will consist of 100 multiple-choice questions designed to test nine abilities important to the performance of the firefighter's job, such as memorization, visualization, and reasoning. To help you prepare for this examination, the Guide is divided into three major sections:

Section I: **General Examination Information** The first section of the Guide provides you with information that is useful when taking any type of multiple-choice examination. This section provides suggested examination-taking strategies (such as underlining important words in questions); a strategy for analyzing and minimizing errors; and instructions regarding the answer sheet to be used for the actual examination.

Section II: **Ability Areas** The second section of the Guide focuses on the nine ability areas that will be measured on the examination. This section provides a definition, examination-taking strategies, sample questions, and explanations of the answers to the sample questions for each ability area.

Section III: **Practice Examination** The third section of the Guide contains a 30-question Practice Examination, including questions covering all nine ability areas and explanations of the answers to these questions. We recommend that you take this Practice Examination after reviewing the Guide to assess your understanding of the information and examination-taking strategies presented. In addition, taking the Practice Examination may help you to identify your current level of performance across the ability areas, and to identify areas where you may want to concentrate any preparation efforts.

We encourage you to review this Guide as many times as necessary to become comfortable with the information and examination-taking strategies presented.

SECTION I: GENERAL EXAMINATION INFORMATION

A. Objectives

To familiarize you with the nine ability areas covered on the examination.

The nine abilities to be tested are: Memorization, Visualization, Spatial Orientation, Verbal Comprehension, Verbal Expression, Information Ordering, Problem Sensitivity, Deductive Reasoning, and Inductive Reasoning. This Guide will provide you with definitions of these ability areas and examples of how they apply to the job of an entry-level firefighter.

To provide you with examination-taking strategies for each of the nine ability areas.

This Guide contains strategies to help you answer questions testing each of the nine ability areas.

To provide you with some general examination-taking strategies.

This Guide provides some general suggestions for taking an examination with multiple-choice format questions (e.g., circling key words in questions and answering easier questions first).

To familiarize you with the procedures and materials you will encounter during the actual examination.

This Guide includes information about the procedures which you should follow during the actual examination. A 30-question Practice Examination will give you an idea of the types of questions to expect. Taking this Practice Examination will allow you to assess your own readiness and identify those ability areas on which you should focus your study efforts. In addition, taking this Practice Examination may help reduce anxiety or fear of the examination situation. Some of the fear associated with examination-taking situations is related to the novelty of the situation. In other words, applicants simply are not used to taking examinations and are not quite sure of what to expect. Giving you first-hand experience with the examination-taking situation through the use of this Practice Examination may help reduce these fears.

To provide you with strategies to minimize errors or to better select the correct answers.

This Guide presents some common errors made by examinees when answering multiple choice format questions. In addition, some strategies are provided for use when you are not sure of the answer to a question.

This Guide contains several test-taking strategies. Although we do not want to overwhelm you with too many strategies, please keep in mind the following:

1. The more familiar you become with the strategies suggested in this Guide, the more automatic they will become. **REPETITION** and **PRACTICE** are the keys.
2. Many of the strategies suggested for each of the nine ability areas apply only to questions testing those areas. For example, you will see that the suggestions for dealing with memorization questions apply only to those types of questions. By practicing these strategies and becoming very familiar with them, you should be able to decide quickly and easily which strategies to apply to each type of question.
3. Some of the general examination-taking techniques are useful only you do not know the answer to a question. If you are 100% sure of an answer, you should simply fill in the correct answer. For questions for which you are sure you know the answer, you will need to apply very few, if any, of the suggestions in this Guide. However, there are some strategies, such as underlining or circling key words and phrases that do not take much time and are useful for almost all questions.

B. General Examination-Taking Strategies

To do your best on the examination, a list of general examination-taking strategies follows:

Make sure you understand the examination format and requirements.

1. Make sure you read all of the directions carefully.
2. Make sure you know how to mark the answer sheet correctly.
3. Make sure you know how much time you have to complete the examination. As you take the examination, check your watch every once in a while so that you can keep track of the amount of time remaining in the examination period.

Make sure you understand the question.

4. Read each question carefully. If you know the answer, compare it to the available alternatives and pick the closest one.
5. You may write in your examination booklet so mark the examination questions in a way that makes them easier to read. Specifically:
   a. Use slash marks to break down long sentences into smaller parts. This will help you focus on each separate idea presented in the sentence.
   b. Circle key words that tell you the topic of a sentence or passage. This helps you focus on the important parts of the sentence. It also makes it easier when you have to hunt for the answers later.
   c. Find and underline clue words such as some, all, every, sometimes, and, and or.
      1) Words such as all, never, none, and every harden a sentence by indicating there are no exceptions. As a rule, alternatives with these words have less chance of being correct.
      2) Words such as sometimes, may, generally, and possibly soften a statement and leave more room for the alternative to be correct.
      3) AND means that one part of the alternative must be true in addition to another part for the alternative to be correct. OR means that there is a choice of situations; only one part of the alternative must be true for it to be a correct alternative.

Proceed through the questions strategically.

6. Answer easy questions first.
   When you go through each question on the examination, answer the easy ones first and leave the difficult ones until you have answered all of the questions of which you are certain. This will prevent you from spending too much time on any one question. It will also make it more likely that you have the time to respond to, and receive credit for, every question that you can answer easily and correctly. Whenever you do skip a question, use some type of code to identify it as skipped in your examination booklet and do not forget to come back to it.

7. Do not get stuck on words or sentences you do not understand. You may get the main idea of the sentence or paragraph without understanding the individual word or the individual sentence.

8. Use the process of elimination.
   If you do not know the answer to a question, cross off those alternatives you know are clearly wrong. Then put a mark (such as "+", "-", or "?") next to each remaining alternative to indicate what you think about it (e.g., good, bad, or possible). This will save you time, particularly if you decide to skip the question and come back to it later, by reducing the number of alternatives you have to reread and re-evaluate before making your final choice.

9. Guess.
   There is no penalty for guesses on this examination, so be sure to mark an answer for every question. If the examination period is about to end and you believe there will be some questions that you will not be able to complete, save some time (1 or 2 minutes) toward the very end of the examination period to answer these questions, even if you must guess. Although your guesses may not be correct, the alternative is to leave these questions blank and be assured of getting no credit for the question.

Use extra time wisely.

10. If you finish the examination before time is up, go back and review your answers. Make any changes that are necessary. Also make sure that you have placed your answers on the answer sheet correctly.

C. Error Analysis

Strategies for Analyzing and Avoiding Errors

Each one of us has weak areas in our examination-taking behavior. It is to your advantage to identify those weak areas before taking the Firefighter Examination. The sample questions contained in the Ability Area and Practice Examination sections within this Guide are very similar to the questions that will appear on the actual examination. After answering these questions and checking them against the answers and explanations given in this Guide, you should complete the Error Analysis Form contained later in this section. One copy of this form has been provided for use with the sample questions contained in the Ability Area section of the Guide. A second copy of this form has been provided for use with the Practice Examination questions. After completing each of these forms, focus on the questions you answered incorrectly. This will allow you to identify the major weak areas in your examination-taking behavior. This process is called Error Analysis.

There are several possible reasons for choosing an incorrect response to a question. Seven of these reasons follow, along with suggestions for avoiding such errors. Once you have identified the reason for choosing an incorrect response, it will be easier to correct it, in turn making it easier to answer that type of question correctly in the future.

Reasons for Choosing Incorrect Responses

1. **Answer sheet errors and guessing errors**.
   - Since there are a limited number of questions on the examination, errors related to the proper use of the answer sheet are costly. Check yourself as you mark each answer choice on the answer sheet to ensure you are marking the answer you have chosen. Also, make sure you are filling in the answer to the right question. As an additional check, after you complete the examination, go back over every question and answer it again.
   - You may also miss questions because you failed to provide an answer or were forced to quickly mark any answer (i.e., guess) before time was called. If either of these things happened, consider why. Possible reasons and suggestions include:
     a) You may have missed a question because you skipped it and failed to come back to it later. Use some kind of code to identify skipped questions in your examination booklet and remember to go back to them before the examination period is over.
     b) You may have lost track of the time and been unaware that the examination period was about to end before you could mark any remaining unanswered questions. Be sure to check your watch every so often so that you can keep track of how much time you have left. If necessary, be sure to save the last minute or so to mark any unanswered questions.
     c) You may have been forced to make guesses for questions toward the end of the examination because you spent too much time working on difficult questions, rather than skipping them and saving them for later. Or, if you did skip difficult questions, you may have failed to code the various alternatives as, for example, good, bad, and possible. Thus, you did not reduce the number of alternatives you had to reconsider when you reread the questions. Use a coding system not only to identify skipped questions but also to evaluate any alternatives that you do review so that you can save yourself some time rereading and re-evaluating.

2. **Misreading a question or answer by overlooking a key word or phrase**.
   The solution to this problem is underlining. Underlining makes those key words and phrases stand out when choosing an answer. Once you have underlined the key words and phrases in a question, check the details of the possible answers with the details you underlined, one by one. If every detail does not match, consider that answer to be shaky and try another, always keeping in mind that you are looking for the best possible answer.

3. **Not knowing the meaning of one or more key terms**.
   This is a problem of vocabulary. When you come to an unfamiliar word, reread the sentence to determine what the sentence means without worrying about the exact meaning of the unfamiliar word. Try to understand what the sentence or paragraph is attempting to convey. The meaning of the unfamiliar word should become clearer once you understand the phrases and ideas which surround it.

4. **Having difficulty telling the difference between the important and unimportant parts of a question because it is complicated or difficult to understand**.
   - First of all, these are the questions you should skip until the end of the examination. These are also the questions on which you will use the slash mark technique mentioned earlier among the general examination-taking strategies. It is called divide and conquer.
   - Use slash marks to break up the question into smaller parts; then concentrate on one part at a time. When you do go back to these difficult questions, first read the possible answers before reading the question. This tells you what to concentrate on while reading the question. Also, focus on the topic sentences, which are usually the first and last sentences in a question.
   - Read the difficult questions twice. The first time, read for the general idea and do not get stuck on individual words or phrases which you do not understand. The second time, read for more detailed understanding. The first reading will give you the general meaning so that the second reading will be easier. Lastly, picture in your mind what the question is asking.

5. **Not being used to comparing combinations of information**.
   This is a problem of re-arranging information in the correct way so that it makes sense. Underline important pieces of information in the question and then compare this information with the possible answers, point-by-point. Also, concentrate on eliminating the wrong answers first.

6. **Choosing an answer simply because it "looks" good**.
   Several factors may cause you to choose incorrect answers that look good:

   - An incorrect answer may contain an exact phrase from the original question.
   - An incorrect answer may contain a phrase or sentence from the original question, but present it in a different way. For example, an idea which is rejected in the question may be presented as an idea that was supported in the answer.
   - An incorrect answer may overstate what the question has stated. For example, if the question says, "Some fires...", the incorrect answer may say, "All fires..."

   Some strategies for avoiding the tendency to choose incorrect answers that look good include:
   - Have an answer in mind before you look over the alternatives. This will make you less likely to choose an answer that just looks good.

- Use the method of marking each answer to indicate what you think about it (e.g., bad, good, or possible) before choosing one.
- Beware of choosing answers based on common sense or previous knowledge and experience. Answer only on the basis of the material presented in the examination question itself.
- Stick strictly to the facts or rules described in the examination question itself. Do not fall for answers that stretch or exaggerate these facts or rules. This is the time to watch out for words such as “only,” “never,” “always,” “whenever,” “all,” etc.
- Beware of answers containing exact words or phrases from the question material. Do not simply assume that such answers are correct.
- Prepare a defense for your answer choice. Find something in the examination question which will allow you to give a strong defense for your particular answer choice.

7. **You may not know why you missed a question**.
   Finally, if you just do not know why you missed a question because you do not know why the correct answer is correct, we suggest you review the Guide again. Also, talk with someone else who may be taking the examination to compare answers and information; or ask a tutor, friend, or family member for help.

Remember, as you review your answers to the sample questions contained in the Ability Area and Practice Examination sections of this Guide, use the Error Analysis Forms to evaluate or diagnose your examination-taking behavior.

Instructions for Using the Error Analysis Form

Use the form on the next page to analyze sample questions you answer incorrectly in the Ability Area section of this Guide. As you work through the Ability Area section, review each sample question using the following instructions:

If you answered the question correctly, place a check mark in the blank within the column labeled "CORRECT." Examine the ability areas listed for each incorrectly answered question to determine those abilities that are giving you the most difficulty. Then, for each incorrect answer, identify which of the seven reasons presented previously caused you to make the error and mark the appropriate blank in the set of columns labeled "REASONS FOR INCORRECT ANSWERS." Total the number of marks in each column to identify the kinds of errors you are making most often. Once you have identified the troublesome ability areas and errors, go back and review the examination-taking strategies for the ability areas and the strategies for avoiding errors. Focus on those areas and errors that are causing you to choose incorrect answers most often.

Another Error Analysis Form appears in the Practice Examination section of this Guide. Use that form to analyze errors that you make on the Practice Examination.

Error Analysis Form: Sample Questions

	ABILITY AREA	✓ IF CORRECT	✓ NUMBER OF REASON FOR CHOOSING INCORRECT RESPONSE (from the reasons given in Section IC beginning on page 5)						
			1	2	3	4	5	6	7
1	MEMORIZATION								
2	MEMORIZATION								
3	VISUALIZATION								
4	VISUALIZATION								
5	SPATIAL ORIENTATION								
6	SPATIAL ORIENTATION								
7	VERBAL COMPREHENSION								
8	VERBAL COMPREHENSION								
9	VERBAL EXPRESSION								
10	VERBAL EXPRESSION								
11	INFORMATION ORDERING								
12	INFORMATION ORDERING								
13	PROBLEM SENSITIVITY								
14	PROBLEM SENSITIVITY								
15	DEDUCTIVE REASONING								
16	DEDUCTIVE REASONING								
17	INDUCTIVE REASONING								
18	INDUCTIVE REASONING								
TOTAL # QUESTIONS CORRECT									
TOTAL # QUESTIONS ANSWERED **INCORRECTLY** FOR EACH REASON LISTED IN SECTION IC									

D. Answer Sheet Procedures

Instructions for Using the Answer Sheet

This section describes the procedures for filling in the answer sheet that will be used during the actual examination. We are reviewing these procedures now because we will ask you to practice using these procedures when answering the sample questions in the Ability Area and Practice Examination sections of this Guide.

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. A sample of a portion of this answer sheet appears on the next page. This sample is to be used to record your answers to the questions contained in the Ability Area section of the Guide. Another sample of the entire answer sheet is provided with the Practice Examination. The specific procedure for marking the answer sheet during the actual examination is described below.

Practice this procedure by using the sample answer sheets to record your answers to the Ability Area and Practice Examination questions.

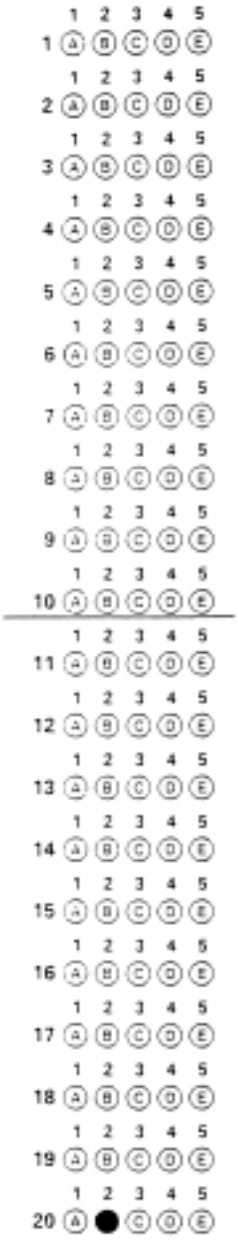
There are a couple of points we urge you to keep in mind when marking the answer sheet:

1. Be sure that the number of the question you are reading in the examination booklet matches the number of the answer you are marking on the answer sheet. That is, if you are on question 12 in the examination booklet, be sure you are marking question 12 on the answer sheet. The question numbers run DOWN (↓) rather than across (→) the Answer Sheet.

2. Be sure to place all of your answers on the answer sheet. Do not place any other stray marks or notes on the answer sheet. Instead, use your examination booklet for scratch work or to mark questions to which you plan to return later. Although you may write in your examination booklet, your score will be based only on the answers that appear on your answer sheet.

Answer Sheet: Sample Questions

This is a sample of a portion of the answer sheet that you will use at the actual examination. Use this sample to record your answers to the 18 questions contained in the Ability Area section of this Guide. Since you will not need to use either question number 19 or 20, we have filled in question number 20 to show you how this answer sheet should be marked.



SECTION II: ABILITY AREAS

The Massachusetts Firefighter Written Examination is designed to test nine mental abilities that are essential to the performance of the firefighter's job. This section provides an overview of the nine ability areas, introduces you to the types of questions that will be used to test each ability area, and provides you with some useful strategies for answering each type of question. Both the sample questions contained in this section and the questions contained in the Practice Examination within this Guide are very similar to the questions that will appear on the actual examination. By practicing the suggested techniques on the sample questions and Practice Examination questions, you can improve your examination-taking skills.

For each ability area, the following information is provided:

Definition:	In this section, the ability area is defined and you are provided with examples of how the ability applies to the job of an entry-level firefighter.
Techniques:	This section describes the various types of questions that will be used for each of the nine areas. For each type of question, this section presents some strategies to assist you in choosing the correct response.
Examples:	Examples of the types of questions which you will be asked will give you a better understanding of the actual examination and the way that suggested examination-taking strategies should be applied. Again, these sample questions are very similar to those that will appear on the actual examination.
Answers and Explanations:	Answers and explanations appear directly below each set of sample questions. By answering the sample questions and reviewing the explanations, you can determine how well you understand the examination-taking strategies presented. You will also be able to identify those ability areas on which you will need to spend more time.

Remember to use the sample question answer sheet and the error analysis form as you take and review the sample questions contained in this section of the Guide.

A. Memorization

Definition: This is the ability to memorize and retain new information which occurs as a routine part of the task or job. This ability does not include the ability to memorize procedures. An example of this is remembering the layout of a building in order to conduct a thorough search for victims and to exit the building. Another example is remembering the specific details of a given street in the firefighter's assigned district in order to place firefighting vehicles and equipment in appropriate locations. This ability also includes memorizing maps and traffic patterns. This ability does not include the memory of information which occurs out of the task situation, such as newspaper articles about events in other cities.

Techniques: The first group of questions on the actual examination will be memorization questions. The answers to memorization questions will be based on a picture you will be asked to study. This picture will show a fire scene. You will be given five minutes to study the picture. After that, the picture will be collected from you, so it is very important that you inspect it carefully. The five-minute study period will be followed by another five-minute "thinking" period. During the thinking period, you will be instructed to think about the picture. This thinking period will allow you to absorb the details of the picture.

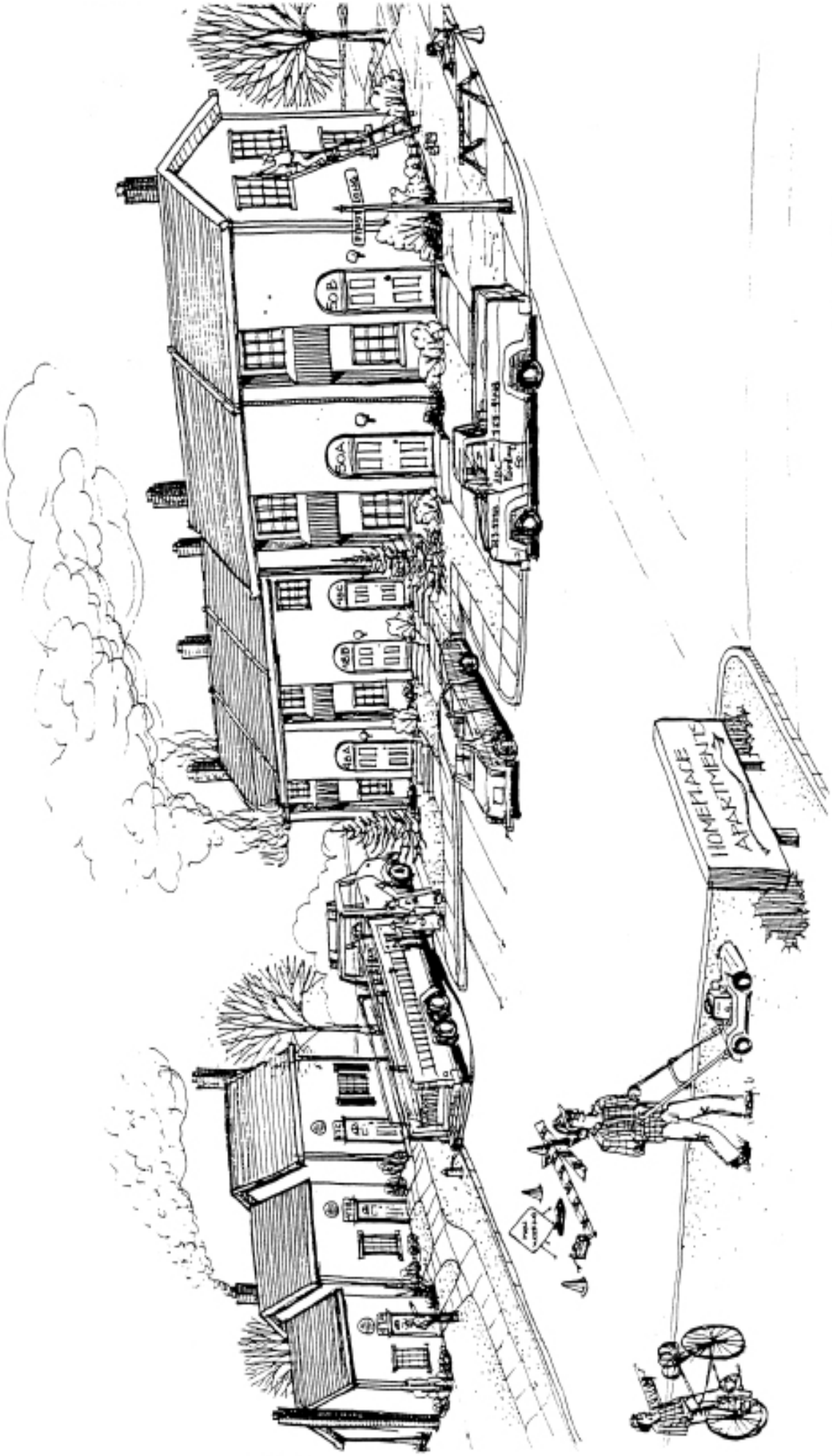
You will **NOT** be allowed to use your pencil to write on the picture or on anything else during the memorization portion of the examination, but you can substitute with your fingers. Use your finger to circle, underline, and emphasize important details. Circle the time on clocks, signs in windows, etc. Using your finger will highlight what your eyes see. Specifically:

- Use your finger to **DRAW** two mental lines through the picture so you divide the picture into quarters. Then study a quarter of the picture at a time and compare the contents of each quarter.
- **REPEAT** questions to yourself constantly. You are exercising your memory this way.
- **INSPECT** key information in each section of the picture through which you have drawn lines. Remember the important details; remember the little details.
- **VISUALIZE** things, events and people in your mind, whether it is pictures or words.
- Lastly, order or **ARRANGE EVENTS** and things in your mind. Information which is in some order is easier to remember.

To summarize, remember the following code word: **DRIVE**

D	Draw lines
R	Repeat questions
I	Inspect information
V	Visualize things
E	Event ordering makes information easier to remember

Examples: Use the memorization picture on the next page to answer sample questions 1and 2, but do not look at the sample questions until after studying the picture. As noted above, study the picture for 5 minutes, then put the picture aside and think about it for 5 minutes without looking at it. Finally, answer sample questions 1 and 2.


HOMEPLACE
APARTMENTS

Examples - Memorization

Consider the picture you have just studied when you answer sample questions 1 and 2, but do not look at these questions until you have spent five minutes studying the memorization picture and five minutes thinking about the picture.

1. The number of the apartment that appears to be on fire is:

   A. 47A.
   B. 47B.
   C. 48A.
   D. 48B.

2. If the fire truck backs up straight into the street, it is most likely to hit a:

   A. sign that states “Homeplace Apartments”.
   B. “Men Working” sign.
   C. truck that says “ABC Painting Co.” on the side.
   D. street pole that states “First” and “Long”.

Answers and Explanations: Sample questions 1 and 2 are based on the memorization picture provided. Refer back to the picture when reviewing the answers.

1. The correct answer is C. Apartment 47B has smoke coming out of its chimney, but apartment 48A is the one that appears to be on fire.

2. The correct answer is B. If the fire truck backs up straight into the street, it will hit the “Men Working” sign in the road.

B. Visualization

Definition: This ability involves forming mental images of what objects look like after they have been changed or transformed in some way. As an example, a firefighter will see a building as he/she approaches it on the way to an alarm. This ability will allow the firefighter to visualize how the building will look from the inside or from the back based on how the building looks from the front.

Techniques: Sample questions 3 and 4 are visualization questions. When reviewing questions like these, focus your attention on the parts of the object that are visible from all viewing angles. That is, focus on those parts of the object that you can see from the initial angle (e.g., from the front) and the angle from which the object is to be viewed when answering the question (e.g., from the back, from above, or from inside). Compare each alternative with the initial object point-by-point, not as a whole. When making your comparisons, keep in mind that when objects are viewed from the back or inside, the parts of the object appear in the reverse position.

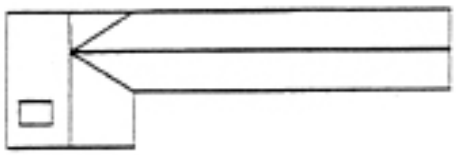
For example, consider sample question 3 in which you are shown the front of a house that has a chimney, door, windows and several sections, and then asked to identify the correct drawing of the house from above. Attention should be focused on those things that can be seen from both the initial angle (front) and the new angle (above). This includes the rooflines and the chimney. All other parts of the house (e.g., the windows and doors) should be ignored.

Examples:

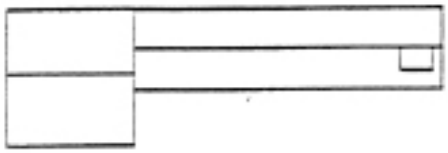
Use the drawing shown below to answer sample question 3.

3. Shown above is a house as seen from the front. If Firefighter Marino was standing on a 75-foot ladder, he would see the following scene from above:

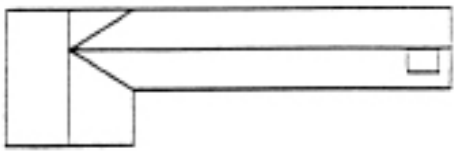
A.



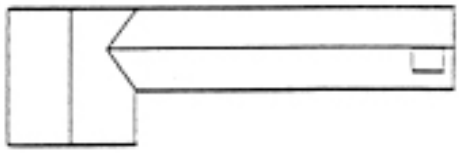
B.



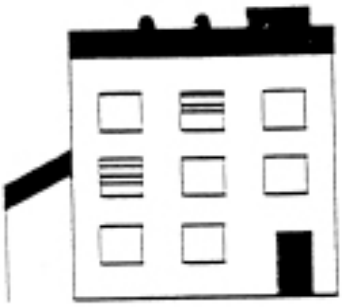
C.



D.

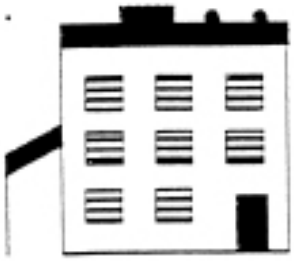


Use the drawing shown below to answer sample question 4.

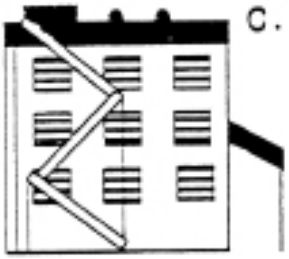


4. Shown above is an apartment building as seen from the front. From the back, this apartment building would look like:

A.



B.



C.

D.

<u>Answers and Explanations</u>: In explaining each question, we have identified those parts of each object that candidates should attend to and those they should ignore. Then we have explained each incorrect alternative by identifying the part of the object that is drawn incorrectly in that alternative.

3. The correct answer is C. Again, since the house is to be viewed from above, attention should be focused on the rooflines and the location of the chimney. Windows and doors should be ignored since they cannot be seen from above.

   A is incorrect because the chimney appears in the wrong location on the roof.

   B is incorrect because the roofline for the smaller section of the house is not drawn correctly. It is drawn horizontally rather than vertically.

   D is incorrect because the roofline is drawn incorrectly in the area where the two sections of the house meet. The roofline for the larger section of the house should come to a point when it reaches the roofline for the smaller section of the house—as shown in correct alternative C. Instead, the roofline for the larger section of the house is drawn so that it falls short of the roofline for the smaller section of the house.

4. B is the correct answer. Since the apartment building is to be viewed from the back, attention should be focused on those parts of the building that can be seen from the front and back. This includes the overhang on the side of the apartment building and the objects on the roof. Since the building is to be viewed from the back, these features appear in the reverse or opposite position in correct alternative B. Features that cannot be viewed from both the front and back should be ignored, such as the windows, the door, and the fire escape shown in alternative B.

   A is incorrect because the overhang appears in the same position as in the original apartment building, rather than being reversed as in correct alternative B.

   C is incorrect because no overhang appears on this alternative and because only one of the three objects on the roof appears in the correct location.

   D is incorrect because, as in alternative A, the overhang appears in the same position as in the original apartment building rather than being reversed. In addition, the square object on the roof does not appear in reverse position as it should. Finally, the round objects on the roof do not appear at all.

Note: In addition to the above examples, you may be shown the front of a structure from the outside and asked to indicate what the front of the structure would look like from the inside. (See the Practice Examination in this Guide for an example.)

C. Spatial Orientation

Definition: This is the ability to keep a clear idea of where you are in relation to the space in which you happen to be. This ability helps an individual avoid getting lost in a particular space whether that space is a city, a building, or a group of structures. With this ability, an individual should be able to look at a map or a layout of an area and determine his or her position in that area. The question which this ability allows the person to answer is "If the environment looks like this, where am I?"

Techniques: Sample questions 5 and 6 measure spatial orientation. Spatial orientation questions will often use a map and ask you one of two types of questions.

Type 1: The first type of question (see sample question 5) will ask you to pick the best route that you can take to get from one point to another without breaking any traffic laws. Generally, there are two reasons that a suggested route would not be acceptable:

1. The route may suggest that you break traffic laws by driving down a one-way street in the wrong direction, or
2. The suggested route may not represent the quickest route to the fire. There may be an alternative that suggests another route that goes more directly to the fire.

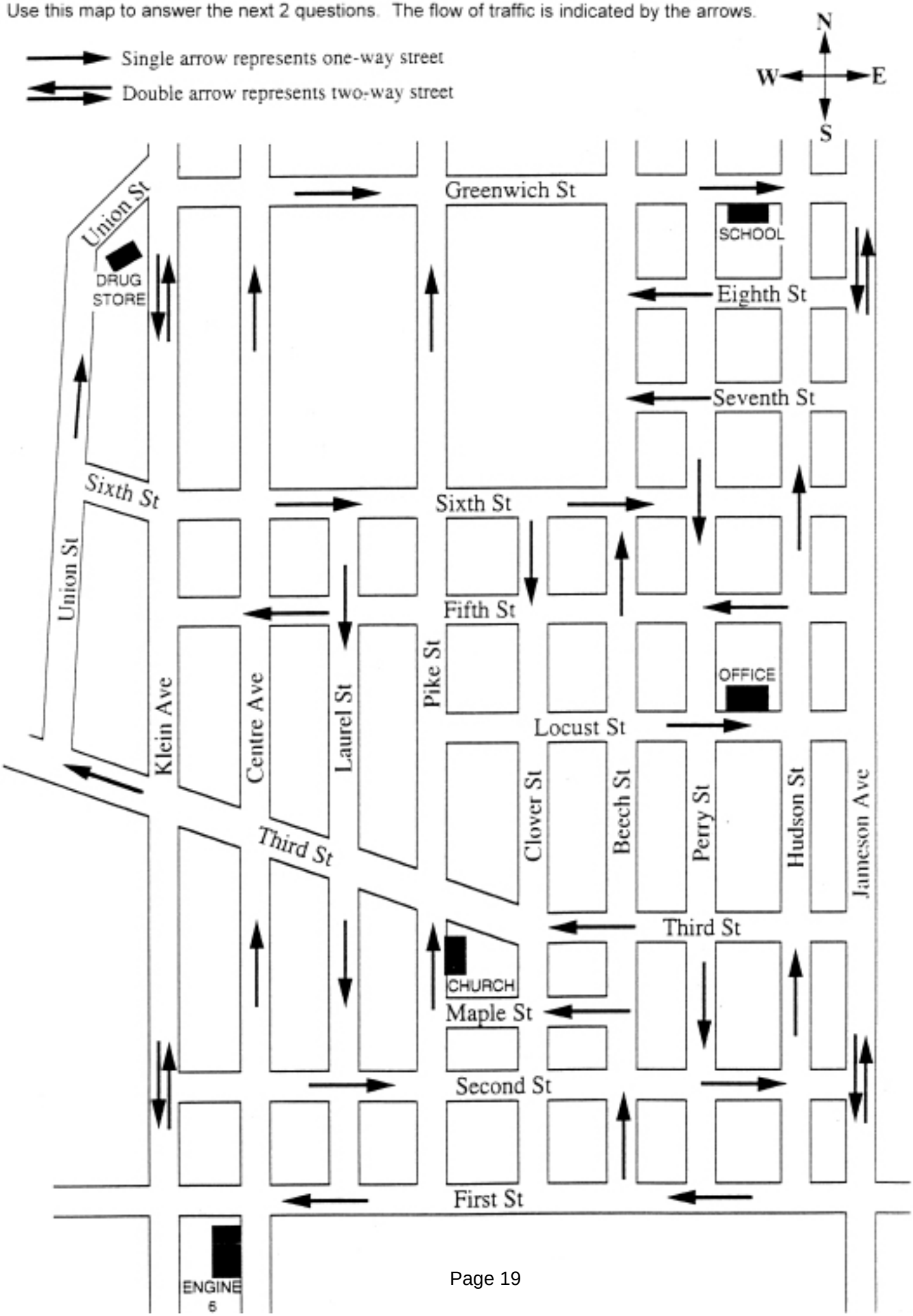
Type 2: The second type of question (see sample question 6) will give you a set of directions and ask you to indicate where you will be located if you follow these directions.

Trace the route described in each alternative when answering either type of question (with your finger or, preferably, a pencil). Erase the route completely if you make an error. Turn the map in any way necessary (e.g., sideways, upside down) to make it easier for you to understand the directions. If there is more than one question using the same map, erase any lines you drew when answering the first question. If you do not, your lines will clutter the map and confuse you. Finally, when answering these questions, you should pay particular attention to two things—the compass identifying the directions (north, south, east, west), and the arrows indicating the direction and flow of traffic (one-way street or two-way street).

Use this map to answer the next 2 questions. The flow of traffic is indicated by the arrows.

Single arrow represents one-way street

Double arrow represents two-way street



Examples: Use the map on the previous page to answer sample questions 5 and 6. The flow of traffic is indicated by the arrows on the map. For all questions the definition of a "block" is as follows: traveling from one intersection to the next intersection of streets represents one block, regardless of the size or the shape of the block and regardless of whether the intersecting streets lead right only, left only, or in both directions.

Type 1:

5. Your fire company, Engine 6, has been dispatched to respond to a fire at the drug store. (Note: the actual written examination will not give the street address of a building.) The most direct route to the fire without breaking any traffic laws is to travel north on Centre Ave., then go:

   A. northwest on Third St., north on Klein Ave., west on Sixth St., and north on Union St. to the fire.
   B. west on Greenwich St. and south on Union St. to the fire.
   C. northwest on Third St. and north on Union St. to the fire.
   D. west on Sixth St. and north on Union St. to the fire.

Type 2:

6. Your fire company, Engine 6, has been dispatched to respond to a fire. You are at the intersection of Centre Ave. and First St. when you turn north and travel one block, turn east and travel six blocks, turn north and travel three blocks, and finally turn west and travel two blocks before stopping. When you stop, you are at the intersection of:

   A. Sixth St. and Beech St.
   B. Seventh St. and Perry St.
   C. Locust St. and Clover St.
   D. Fifth St. and Beech St.

Answers and Explanation:

5. C is the most direct route to the fire without breaking any traffic laws.

   A is incorrect because it suggests the firefighters travel in the wrong direction (i.e., west) on Sixth.

   B is incorrect because it suggests the firefighters travel in the wrong direction on Greenwich (i.e., west) and on Union (i.e., south).

   D is incorrect because it suggests the firefighters travel in the wrong direction (i.e., west) on Sixth.

5. D is the correct answer. Question 6 can be explained by tracing the path described. Candidates may get these kinds of questions wrong if they travel the wrong number of blocks or in the wrong direction, skip a step, etc. Be sure to read the directions carefully.

D. Verbal Comprehension

Definition: This is the ability to understand language, either written or spoken. This ability involves understanding individual words as well as patterns of words (sentences and phrases) so it involves more than simply having a good vocabulary. It is the ability to hear a description of an event and understand what happened. It is also the ability to read a sentence or series of sentences and understand the meaning. This ability involves receiving information, not giving it. This ability might be used in reading written material, such as a report describing a fire or fire prevention codes; listening to descriptions of events, places or people; receiving radio communications; or following oral instructions.

Techniques: Sample questions 7 and 8 measure the ability of verbal comprehension. To test verbal comprehension, you will be given a passage of one or more paragraphs describing either a fire-related incident or a set of firefighting procedures. These passages will be about 1/2 page in length and will be followed by one or more questions. The questions will test your understanding of the passage. For the most part, such questions test reading comprehension so to improve your verbal comprehension skills, you need to improve your reading skills.

For some candidates, these questions may prove to be difficult simply because of the initial amount of information which you will be given. Some of the techniques you can use on these questions have already been discussed as part of the general examination-taking strategies.

1. One of the most useful techniques involves reading the examination questions and possible answers before reading the passage to help you identify and focus on the information that is needed. You may find that you locate the answer to one of the questions before you even finish reading the passage for the first time. If so, answer the question right away. As you go from one sentence or paragraph to the next in the initial passage, you may have to look back at the questions to remind yourself of the specific details for which you are searching.

2. Another extremely useful technique is to circle important or key words once you have read the questions related to a passage and know on what to focus. For example, if the questions related to the passage involve a particular person, circle the name of that person when you come to it in the passage so you do not waste time looking back through the passage later. Also, use your pencil to make the passage easier to understand by placing slash marks between key phrases. These tend to be time-consuming questions which you may not have the chance to read more than once.

3. A third technique is to read for understanding the first time and avoid getting stuck on individual words that you do not understand. Sometimes you can tell the meaning of a word from the phrases or ideas that surround it, or you may not need to understand the word at all to understand the passage. Do not try to read faster than you can read with comprehension.

4. Try to form a picture in your mind as you read. Books used to teach reading contain many pictures because pictures aid in comprehension.

5. Ask yourself questions as you read. When you finish reading a paragraph or a long sentence, ask yourself what the paragraph was saying. What was the point of the sentence?

It is important to note that most of the suggested strategies for verbal comprehension questions are meant to help you understand the relatively lengthy passages of information which tend to come before these questions. Thus, these strategies would be useful with any type of question that requires you to read and understand a large amount of information.

Examples: Use the following passage to answer sample questions 7 and 8:

Firefighters from Engine Company 8 were dispatched to respond to a fire at 10:30 p.m. The fire was at a clothing warehouse in a very busy area of town. Upon arrival at the fire at 10:35 p.m., Firefighter King saw a teenage boy with blonde curly hair, a green tee shirt, blue jeans and white sneakers running from the warehouse. A young girl with long brown hair, a white sweater and green pants came up to Firefighter Watkins and stated that she saw some boy break a basement window in the warehouse and crawl inside. When she saw flames on the first floor she called the fire department. A man in his early thirties, with straight blonde hair, blue jeans and a long-sleeved white shirt, came running up to Firefighter Stanton and stated that he owned the warehouse, and that there were large containers of highly flammable cleaning fluids located in the back of the warehouse. A 20 mile per hour wind was blowing from the front of the warehouse to the back and could quickly spread the fire to the back. The Firefighters who had been positioned behind the warehouse were moved out and Battalion Chief Smith sent Firefighters Casey and Taylor to clear any people out of the surrounding buildings. Upon investigation, it was discovered that the fire was restricted to several racks of clothes at the front of the warehouse. The fire was put out at 10:45 p.m.

7. According to the information above, the fire most likely was started by:

   A. a teenage boy.
   B. a young girl.
   C. a man in his early thirties.
   D. some highly flammable cleaning fluids that caught on fire.

8. According to the information above, the firefighters who were positioned behind the clothing warehouse were moved out by the Battalion Chief because:

   A. there was no fire, or threat of fire, at the back of the clothing warehouse.
   B. highly flammable cleaning fluids were located at the back of the clothing warehouse.
   C. the fire had spread to the back of the clothing warehouse.
   D. the fire had spread to the buildings surrounding the clothing warehouse.

Answers and Explanations: As suggested on the preceding page, you should review the questions related to each verbal comprehension passage before reading the passage itself. You should then circle/underline key words and phrases in the passage which relate to the questions.

7. A is the correct answer. The best answer can be found by reviewing what the passage said about each of the alternatives. The teenage boy was seen running from the warehouse by a firefighter. He also was seen breaking a basement window and crawling inside by a young girl. The fact that there are multiple witnesses to the unusual actions of the teenage boy makes him a good suspect.

   The young girl is an unlikely suspect because she called the fire department to report the fire. In addition, when the firefighters arrived, the young girl told one of the firefighters about a teenage boy who also had been seen by one of the other firefighters. Thus, B is not correct.

   The man in his early thirties also is not a good suspect because he owned the warehouse and warned the firefighters about the highly flammable fluids. Thus, C is not correct.

   Finally, the passage indicates that there were some highly flammable cleaning fluids located in the back of the warehouse. However, it also indicates that the fire was restricted to several racks of clothes at the front of the warehouse and was put out 15 minutes after the firefighters were dispatched. Thus, while the cleaning fluids were in danger of catching on fire, they did not actually catch on fire and they did not cause the fire. D is not correct.

8. The correct answer is B. The key to this answer can be found in the section of the passage which starts with, “there were large containers of highly flammable cleaning fluids…” and continues to the end of the passage. This part of the passage reveals that, given the speed and direction of the wind, the fire (which was located in the front of the warehouse) could have spread to the back of the warehouse where some highly flammable cleaning fluids were stored. On this basis, it can be assumed that the firefighters were moved out from behind the warehouse and asked to clear the surrounding buildings because the cleaning fluids were in danger of catching on fire.

   A is not correct. The part of the passage identified above reveals that there never was any fire in the back of the warehouse. (“The fire was restricted to several racks of clothes at the front of the warehouse.”) However, there was a <u>threat</u> of fire in the back of the warehouse, given the direction and speed of the wind and the location of the cleaning fluids.

   C and D are incorrect. The fire “was restricted to several racks of clothes at the front of the warehouse.” There was <u>only a threat</u> of fire in the back of the warehouse and in surrounding buildings, due to the direction and speed of the wind and the location of the cleaning fluids.

E. Verbal Expression

Definition: This ability involves using language (either written or spoken) to communicate information or ideas to other people. These other people might be other firefighters, fire officers, witnesses, arson suspects, fire victims, or any individuals with whom the firefighter might come in contact. Additionally, this ability would come into play when a firefighter talks about fire safety to children as part of an in-school program, to shop owners with respect to safety in their shops, and to citizens as part of a home safety program. This ability would include vocabulary, knowledge of differences among words, and knowledge of grammar and the way words are ordered.

Techniques: There are two types of verbal expression questions that you may see on the examination.

Type 1: The first type of question (see sample question 9) requires that you identify the best way to communicate a particular thought or idea to another individual. For questions such as these, it is important to ensure that the alternative you choose correctly reflects the meaning of the original idea and expresses the original idea in the most clear and concise manner.

Type 2: The second type of verbal expression question (see sample question 10) requires that you arrange your thoughts or statements in a logical order so that others will understand you. Such questions start with a list of statements to be made by an individual, either orally or in writing. For example, the statements may be descriptions of several events that occurred in order at an emergency scene. However, these statements will not be presented to you in the correct order. The response alternatives will present you with several possible ways to order or arrange the statements, only one of which makes sense.

When working with a question like #10, look at the content of each statement or phrase separately and determine whether it can stand alone or whether it must come before or after another statement. If it cannot stand alone, look for the statement that must come before or after it. Ask the questions: “What happened first?” “What happened next?” In addition, consider whether there are statements after which the statement under consideration cannot follow and before which it cannot precede. This also will help to narrow down the choices.

Once you have made some decisions about the order of the statements, work through each of the alternatives one by one, keeping in mind the statements that must (or cannot) appear together. Do not try to determine the correct order of all of the statements before looking at the alternatives provided. The reason for this is that there may be several logical ways in which to arrange the statements. However, only one logical order will be included among the alternatives presented.

Examples:

Type 1:

9. Captain Lewis sent two firefighters into a home with two stories above ground and a basement to search for the exact location of a reported fire. The firefighters found that the fire was located in one corner in the rear of the basement. The best way for the firefighters to report this information to Captain Lewis is as follows:

   A. "The fire is located on the lower level in the rear."
   B. "The fire is located in the southeast corner of the lower level."
   C. "The fire is located in the southeast corner of the basement."
   D. "The fire is located in the rear of the basement."

Type 2:

10. Firefighter Rogers would like to include the following statements in a report about a recent explosion. (These statements are NOT listed in the correct order.)

   1) I quickly treated the pedestrian for the injury.
   2) The explosion caused a glass window in an office building to shatter.
   3) After the pedestrian was treated, a call was placed to the Police Department to ask for help in evacuating the area.
   4) After all the glass settled to the ground, I saw a pedestrian who was bleeding from the arm.
   5) While returning to the firehouse, I heard a loud explosion.

   Firefighter Rogers could communicate the above statements most effectively if he arranges them in his report in the following order:

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

Answers and Explanations:

9. C is the correct answer. The alternatives differ in two important ways. The first concerns the level of the house on which the fire is located. Alternatives C and D indicate that the fire is in the "basement," thus leaving little room for confusion. In contrast, alternatives A and B use the term "lower level." A firefighter could interpret "lower level," as the basement or as the lowest above-ground level in the house. Since the term "lower level" is more likely to confuse the firefighters than the term "basement," responses C and D are better than responses A and B.

   Second, the alternatives differ in the detail used to describe the area of the basement in which the fire is located. Alternatives B and C use more detail by stating, "in the southeast corner." This detail allows us to break the basement up into four sections and gives us a very specific idea of where the fire is located. In contrast, alternatives A and D use the phrase "in the rear." This allows us to break the basement up into only two sections—front and rear—and gives us a less specific idea of where the fire is located.

   Combining the above two ideas, C is the best answer.

10. D is the correct answer for the following reasons:

    Statement 5 must come first because it introduces the incident or topic (the explosion) on which all other statements are based. This allows us to eliminate alternative A.

    Statement 3 must follow statement 1 because 1 discusses the treatment of the injured pedestrian and 3 discusses what happened after the pedestrian was treated. This allows us to eliminate alternative B.

    Statement 4 must follow statement 2 since 2 discusses the shattering of the glass window in the office building and 4 discusses what happened after the glass settled to the ground. However, this information does not allow us to eliminate any alternatives.

    Both statements 1 and 3 must follow statements 2 and 4. This is the case because statements 2 and 4 indicate that the injured pedestrian was not discovered until after the shattered glass settled to the ground, while statements 1 and 3 discuss the treatment of the pedestrian and the events that followed this treatment. This allows us to eliminate the only remaining alternative -- C. The only alternative left is D.

F. Information Ordering

Definition: This is the ability to apply specific sequences or procedures to a situation for the purpose of putting the information in the best or most appropriate order. In order to use this ability, an individual must have rules or instructions regarding the correct order of information. For example, in a first aid situation, the person must first be given a set of instructions concerning what should be done first, second, and so on. This ability would also come into play when determining what information must be considered before making a decision or taking a particular action. For example, if placing additional vehicles or equipment at a fire scene would block the flow of traffic, fire personnel should weigh traffic backup against alternative firefighting procedures before taking any action.

Techniques: There are two types of information ordering questions that you will find on the examination. Both types of questions usually start off with the relevant rules, procedures, or other items of information.

Type 1:
In the first type of question (see sample question 11), the initial items of information may be scrambled or presented out of order and you may be asked to arrange the information in the most logical order. Sometimes it is just a matter of arranging information in correct time order.

At other times, it may be a matter of arranging information in order of importance.
The approach suggested for the first type of information ordering question is similar to the approach suggested for the second type of verbal expression question. That is, put in order only as much information as you need to answer the question. Do not try to put all of the pieces or items of information in correct order. You could be wasting valuable time doing this because you usually do not need to put all of the items in order to identify the correct answer. If you are not sure which item should be first on the list, you may find it easier to note which item should be last. Even if you do not know what should come first or last, you may still know that one of the items should come after another. If so, you may be able to choose the correct answer (or eliminate incorrect answers) by using just those two items to answer the question.

Once you have made some decisions about the order of the information, go through the alternatives one by one. Examine each one until you find it to be wrong. Then go on to the next possible answer. **The key thing to remember is that you practically never need to know the correct order of all of the items to answer these questions.**

Type 2: In the second type of information ordering question (see sample question 12), the initial passage presents the procedures in the order in which they must be performed. You are then given a specific set of events and asked to identify the next step which must be followed (based on the order indicated in the initial passage). Such questions require you to review closely the order of the procedures presented in the initial passage.

Examples:

Type 1:

11. Suppose that fire medics have arrived at the scene of an automobile accident. One of the victims is lying on the ground. The medics believe that the victim has a severe back injury so they must get the victim to the hospital as soon as possible. The following steps are used to place the victim on a backboard. (These steps have NOT been placed in the correct order.)

    1. Position the board on the ground next to the victim.
    2. If the victim is not lying on the center of the board, slide the victim to the center.
    3. Roll the victim on his/her side so that the board can be placed underneath him/her.
    4. Roll the victim onto the board.

    The above procedures should be performed in the following order:

    A. 1, 2, 3, 4.
    B. 2, 3, 1, 4.
    C. 1, 3, 2, 4
    D. 3, 1, 4, 2.

Type 2:

12. When a fire truck breaks down, the driver of the truck should first notify the dispatcher of the location and assignment of the truck, the nature of the trouble, and the help needed. If possible, the firefighters should fix the problem themselves. The driver should notify the dispatcher again when the truck is returned to service. The firefighters should then continue with the assignment unless the dispatcher provides other instructions. Upon return to the station, the driver should make the proper entry in the log.

    Consider the following situation:

    A driver of a fire truck has just fixed a small problem with his truck while on an assignment away from the station. According to the procedures described above, the next thing the driver or firefighters should do is to:

    A. contact the station officer, report the trouble and the truck repair, and wait for further orders.
    B. continue on with the work, and finish the job as assigned.
    C. notify Fire Maintenance that the problem has been fixed.
    D. notify the dispatcher that the truck has been returned to service.

Answers and Explanations: As suggested earlier, these questions will usually start off with some rules or procedures. You will then be asked to do one of two things -- to place the procedures in the appropriate order, or to determine the next step which must be followed given a specific set of events. Both types of questions are represented on the previous page.

11. The correct answer is D. Several conclusions can be drawn about the procedures presented. Since step 2 suggests that the victim is already on the backboard, any statement that suggests the victim is not yet on the board must come before step 2. Since all other steps suggest the victim is not yet on the backboard, all other steps must come before step 2. This allows us to eliminate all of the alternatives except D.

    Furthermore, step 4 must follow steps 1 and 3 because step 4 involves rolling the victim onto the backboard and steps 1 and 3 involve preparing the victim to be rolled onto the backboard. Knowing this, however, does not allow us to eliminate any of the incorrect alternatives.

    Finally, step 1 must follow step 3. If the board was placed next to the victim before the victim was turned on his/her side, the board would have to be moved again in order to be positioned underneath the victim when the victim is rolled. If the victim is first turned on his/her side, the board can be placed next to the victim's side immediately and would be underneath the victim when the victim is rolled. Knowing this would at least allow candidates to eliminate alternatives A and C.

12. The correct answer is D. When answering this question, you are encouraged to use slash marks to break up the paragraph into the specific steps that must be followed by a driver (or the firefighters) when a truck breaks down. The steps are listed below:

    1. Notify the dispatcher of the location and assignment of the truck, nature of the trouble and help needed.
    2. Fix the problem, if possible.
    3. Notify the dispatcher when the truck is returned to service.
    4. Continue with the assignment unless the dispatcher provides other instructions.
    5. Upon returning to the station, make the proper entry in the log.

    The situation indicates that the driver is at step 2 of the procedure because he/she has just <u>fixed a small problem</u> with the truck while on an assignment away from the station. You are asked to indicate what should be done next. Therefore, the driver must proceed to step 3 and "notify the dispatcher that the truck has been returned to service."

    A is incorrect because the procedure clearly indicates that the dispatcher, not the station officer, is to be contacted and that the firefighters are to continue with the assignment unless they are given other instructions.

    B is incorrect because the procedure clearly indicates that the dispatcher is to be notified that the truck has been returned to service <u>before</u> the firefighters continue on with the assignment.

    C is incorrect because the procedure clearly indicates that the dispatcher, not Fire Maintenance, is to be notified of the truck's return to service.

G. Problem Sensitivity

Definition: This is the ability to identify or recognize the existence of problems. It involves both recognizing the problem as a whole and recognizing parts of the problem. This ability does not include the ability to solve the problem, only the ability to identify or recognize the problem. Examples of this ability are deciding that additional traffic control personnel are needed at a fire scene or that the crowd that has been gathering at a fire scene is in danger. Another example is determining if procedures have been followed correctly. Again, this ability does not involve the solution to a problem, only the identification of a problem.

Techniques: Sample questions 13 and 14 measure problem sensitivity. Problem sensitivity questions will often begin with the presentation of some rules, procedures, or recommended practices, followed by the description of an incident or situation in which these rules should be applied. Based on the rules provided, you will be required to do one of two things:

Type 1: The first type of question (see sample question 13) will require you to identify an error or problem that has occurred (if any) in the way a situation has been handled, given the rules or set of procedures that have been provided for handling that kind of situation.

Type 2: The second type of problem sensitivity question (see sample question 14) will require you to identify the most serious problem from among a set of possible problems. These questions will be similar to the first type of question, but you will be asked to identify the **MOST** serious of several possible problems rather than to simply identify **THE** problem.

Examples:

Type 1:

13. According to police department regulations, police officers will NOT make notifications to the relatives of a firefighter who is killed or injured while on duty, without the permission of the fire officer in charge.

    Consider the following situation: An on-duty firefighter is injured seriously in a traffic accident. The first police officer on the scene immediately calls the injured firefighter's wife to tell her to which hospital her husband is being taken. According to the information given above, the action of the police officer is:

    A. proper, because it follows the notification policy.
    B. proper, because the next of kin should always be notified in cases involving the hospitalization of firefighters.
    C. improper, because the police officer does not have the authority to make such a notification.
    D. improper, because the police officer should have notified the firefighter's wife in person.

Type 2:

14. The following list identifies some of the inspection activities that must be conducted on fire trucks on a daily and weekly basis:

DAILY INSPECTION

Chassis	Check underneath and clean up.
Battery	Maintain a charge of 1200 or higher and maintain the water level.
Gauges	(After the first run of the day) inspect the gas, oil, ammeter, temperature and tachometer.
Engine	Inspect the oil level and all wire connections. Also clean and dust the engine.

WEEKLY INSPECTION

Body	All screws, bolts and nuts must be kept tight, especially around the doors, brackets and light frames.
Tires	Inspect and use the gauge to check pressure.
Brakes	Maintain all air lines and connections to the wheels.

Consider the following situation: Firefighter Jackson is assigned to inspect a fire truck which has not been on a run for two days. He forgets to do several things that are listed below. Of the following mistakes, the most serious is that he:

A. did not clean the underside of the chassis.
B. failed to use a gauge to check the air pressure in the tires, although he did visually inspect the tires.
C. did not check to see if the screws on the left side of the truck were tight.
D. failed to check the battery for charge and water level.

Answers and Explanations:

13. C is the correct answer. The rule clearly specifies that, “police officers will NOT make notifications to the relatives of a firefighter who is injured, without the permission of the fire officer in charge.” Yet, the incident described in this question indicates that the police officer “immediately called the injured firefighter’s wife.” There is no indication that the police officer first obtained permission from the fire officer in charge. Thus, the action was “improper because the police officer did not have the authority to make such a notification.”

14. D is the correct answer. According to the situation described, the fire truck has not been on a run for two days. The battery should be checked every day. If the battery is low or dead, the fire truck will not be able to respond to calls.

A is not correct because, although the underside of the chassis should be cleaned every day, forgetting to clean the chassis is not as serious a mistake as failing to check the battery.

B is not correct because, according to the passage, tires need only be checked on a weekly basis. Firefighter Jackson did visually check the tires.

C is not correct for the same reason as B. Screws, bolts, etc. on the body of the fire truck need only be checked on a weekly basis.

H. Deductive Reasoning

Definition: This is the ability to take an idea from the general to the specific. That is, this ability involves applying general rules or regulations to specific cases, or proceeding from stated principles to logical conclusions. Rules and procedures are meant to ensure that firefighters make the correct decisions and take the correct action in all types of situations. An example is deciding when to use different types of fire extinguishing solutions, such as foam, wetting agents, fog patterns, etc. Another example is determining whether a fire is controllable or dangerous, or whether a building is at risk of catching on fire or collapsing. Rules and procedures also are meant to ensure that fire personnel can coordinate with personnel from other agencies, such as the police department, hospitals, etc.

Note: This ability should not be confused with inductive reasoning which involves finding a general rule or principle that fits a situation or series of events (going from specific to general).

Techniques: For the most part, deductive reasoning questions start with some general rules and procedures and require the candidate to apply the general rules to specific cases. There are two types of deductive reasoning questions.

Type 1: The first type of question involves the application of a verbal rule or principle or (as shown in sample question 15), the application of a mathematical rule presented in the form of a table.

Type 2: The second type of deductive reasoning question involves assigning a specific case to one of several given categories (see sample question 16).

There are four factors to which you should pay attention in answering questions involving general rules and procedures:

1. Pay attention to the definite order in which steps are taken**.** Make sure the correct answer uses that same order of steps.
2. Pay attention to when a rule or procedure is in effect. Some rules apply only to certain types of situations or certain periods of time. Make sure the correct answer applies to the situation and time in question.
3. Pay close attention to exceptions to the rules**.** Underline key words such as except, unless, if, and only.
4. Pay attention to completeness. If a procedure requires that a firefighter do several things, make sure the correct answer allows for all of those things to be done.

Examples:

Type 1:

15. A large margin of safety should be allowed when choosing the size of rope to use for a given task. As an example, if a rope is to be used to lift a load of 410 pounds, one should not choose a rope with a breaking limit of 410 pounds. Rather, one should choose a rope with about seven times the breaking limit of the load to be lifted - that is, with a breaking limit of 2870 pounds. The table below lists the maximum load that can be lifted, and the breaking limits, for several sizes of rope:

Diameter of rope (in inches)	Maximum load that can be lifted (in pounds)	Breaking limit (in pounds)
¼	5	385
3/8	130	910
½	230	1610
¾	520	3640

According to the information presented above, if a load to be lifted weighs 380 pounds, the rope that should be used to lift this load is how many inches in diameter?

A. 1/4
B. 3/8
C. 1/2
D. 3/4

Type 2:

16. Incidents involving airplanes and/or airport facilities are classified into the following three categories:

    CLASS I: A fire involving airport facilities but NOT involving any airplanes.
    CLASS II: A crash and/or fire involving airplanes only (NO buildings or other structures).
    CLASS III: A crash and/or fire involving a building or other structure in addition to an airplane.

    Consider the following situation:

    A private, twin-engine plane crashed into an airport hangar when it tried to land at a small airport in strong winds. When fire department personnel arrived, they began immediate rescue and firefighting efforts because the small airport was not equipped to deal with such incidents. According to the information presented above, the incident is most accurately categorized as Class:

    A. I.
    B. II.
    C. III.
    D. I or II.

Answers and Explanations: As noted earlier, these questions often start off with some general rules and procedures and require you to apply the general rules to specific situations.

15. The correct answer is D. The key phrase is "load to be lifted." The information in the table indicates that the maximum load that can be lifted by a 1/2 inch rope is 230 pounds. Thus, it is necessary to move up to the next size of rope (3/4 inch) to lift a load of 380 pounds. Since a 3/4 inch rope can lift a maximum load of 520 pounds, such a rope could safely be used to lift a 380 pound load.

    Candidates may have chosen alternative A (1/4 inch) if they were confusing the breaking limit with the load to be lifted. However, the paragraph above the table clearly states that "one should choose a rope with about seven times the breaking limit of the load to be lifted." Therefore, if candidates used the breaking limit to determine the size of rope needed to lift a load of 380 pounds, they would have been looking for a breaking limit of 380 x 7 or 2660 pounds and still should have chosen alternative D.

16. The key to question 16 is to determine how the classes of incidents differ, to review the particular incident presented in the question with regard to these differences, and then to identify the class that matches the particular incident with regard to these differences. The major way in which the classes differ involves the type of objects involved in the incident (building or other structures only, airplanes only, or both).

Class I: airport facilities only (no airplanes).
Class II: airplanes only (no buildings or other structures).
Class III: airplanes plus buildings or other structures.

The correct answer is C. The incident involved an airplane and airport facilities (a hangar). Class III is the only classification that applies to incidents involving airplanes and buildings or other structures. Class I only involves airport facilities and Class II only involves airplanes.

I. Inductive Reasoning

Definition: This is the ability to find a general rule or concept that describes a situation or explains a series of events which might initially seem to be unrelated. An example of this is determining where or how a fire started. Another example is identifying a particular problem with the performance of a group of firefighters after having a chance to watch them at several fires. In addition, this ability involves understanding how a series of events might be connected. An example of this is discovering that the same company owns all of the buildings found to be in violation of a specific fire code.

Note: This ability should not be confused with deductive reasoning which involves applying general rules or regulations to specific cases (going from general to specific).

Techniques: Sample questions 17 and 18 measure inductive reasoning ability. Most of the questions testing inductive reasoning will start with a passage which gives you all of the information you will need to answer the question. More specifically, there are two types of inductive reasoning questions that you may find on the examination:

Type 1: The first type of question (see sample question 17) will require you to identify a general principle based on specific examples.

Type 2: The second type of inductive reasoning question (see sample question 18) will require you to notice something similar about a series of events or objects. In order to do this, you have to be able to identify the details that are important to answering the question.

When answering both types of questions, skim through the passage to get an idea what it is about and then read the questions. For Type 2 questions, identify key information in each of the events or objects described in the passage (by using your pencil to underline or circle this information) and compare this key information point-by-point.

Examples:

Type 1:

---

17. The table below indicates the number of people needed to carry ladders of different lengths.

Ladder length	No. of people needed to carry the ladder
15 feet	1
25 feet	2
35 feet	3
45 feet	4

According to the information presented in the above table, which of the following statements most accurately describes the relationship between the length of a ladder and the number of people needed to carry that ladder?

A. As the ladder length is increased by 10 feet, the number of people needed to carry it is doubled.
B. As the ladder length is increased by 10 feet, the number of people needed to carry it is tripled.
C. The longer the ladder, the fewer the number of people needed to carry it.
D. The longer the ladder, the greater the number of people needed to carry it.

Type 2:

18. The maintenance log for a fire truck shows the following entries:

Daily Maintenance Log		
11/17	**11/18**	**11/19**
Added 5 gallons gas	Added 1 quart oil	Brake fluid added
Brakes squeaked while responding to fire	Turn signal light replaced	Added air to right back tire
Windshield wiper blade replaced	Brakes locked-up during run	Rotated hose (5” line)

Based on the above information, the driver of this fire truck should tell the supervisor that the:

A. electrical system should be checked.
B. brakes should be checked.
C. engine should be checked.
D. tires may need to be replaced.

Answers and Explanations:

17. The correct answer is D. Given the information in the table, D is the only correct statement: the longer the ladder, the more people needed to carry it.

A is incorrect. The table indicates that it takes one person to carry a 15 foot ladder. The table shows the number of people doubling only when going from a 15 to a 25 foot ladder, because it increases from 1 to 2. With every additional 10 feet, the number of people needed to carry the ladder only increases by 1. If the number of people needed to carry a ladder continued to double as the ladder length increased by 10 feet, the number of people needed to carry a 35 foot ladder would be 4, and the number of people needed to carry a 45 foot ladder would be 8.

B is incorrect. Again, the table indicates that it takes one person to carry a 15 foot ladder. If the number of people needed to carry a ladder tripled as the ladder length increased by 10 feet, the numbers of people needed to carry a 25, 35, and 45 foot ladder would be 3, 9, and 27, respectively.

C is not correct because the description of the relationship between the length of the ladder and the number of people needed to carry the ladder is incorrectly reversed.

18. The correct answer is B. In answering this question, you should look for a pattern across the three days that suggests a problem with one of the things mentioned in the alternatives (the electrical system, the brakes, the engine, or the tires). In other words, you should compare the information listed for the three days, and look for some problem that is repeated in one form or another on all three days. There is an incident involving the brakes on each of the three days. Together, these incidents suggest that the brakes should be checked.

A is incorrect because there is no real indication of an electrical problem. Although the windshield wiper blade was replaced on 11/17, the incident only involved the blade, not the electrical mechanism which operates the wipers. In addition, although the 11/18 incident involving the turn signal light could have been caused by an electrical problem, it also could have been caused by a burnt-out light bulb that simply needed to be replaced.

C is incorrect because there is no incident involving the engine on any of the three days.

D is incorrect because there was only one incident involving one tire on 11/19 (the right back tire needed air). There is no indication that the right back tire (or any other tire) needs to be replaced.

SECTION III: PRACTICE EXAMINATION

A. Practice Examination Instructions

This part of the Guide contains a Practice Examination consisting of 30 questions that are very similar to the questions that will appear on the actual examination. It will be good practice for you to take this Practice Examination just as if you were taking the actual examination. You should read and study the entire Guide before you begin.

Use the blank answer sheet on the next page to record your answers to the Practice Examination.

Note that all questions related to each ability area were presented together in the Ability Area section of the Guide and this Practice Examination. The reason for this is because the questions will also be grouped by ability area on the actual examination.

After you have finished this Practice Examination, compare your answers to those in the Answers/Explanations section which follow this Practice Examination and review the explanations provided. Also, fill in the Practice Examination Error Analysis Form. For those questions that you did not answer correctly on your first choice, review the section on Error Analysis and try to determine why you chose incorrect answers.

Before you start the Practice Examination, read the following instructions carefully:

Have a friend or family member time you. When he or she says the word "Go," turn to the page after the answer sheet. The memorization picture that you must study before beginning the Practice Examination appears on this page. You will have five minutes to study this picture. When the person timing you says the word "Stop," close the Orientation and Preparation Guide and spend the next five minutes thinking about what you just studied. You should not take any notes or write on the picture during the five-minute study and "thinking" periods, but you may use your finger to circle and underline key parts of the picture. After you have spent five minutes studying the picture and five minutes thinking about the picture, begin the examination. When the person timing you says the word "Begin," open the Orientation and Preparation Guide to the Practice Examination section and begin reading and answering the Practice Examination questions. The first 5 questions relate to the memorization picture you will have just studied. However, you should not look back at the picture when answering these questions. Allow yourself 40 minutes to complete the Practice Examination. (This does not include the 10 minutes you will take to study and think about the memorization picture.) When the person timing you says the word "Stop," close the Guide. After you have completed the Practice Examination, check your answers and analyze your errors using the Answers/Explanations and Error Analysis Form.

DO NOT PROCEED TO THE PRACTICE EXAMINATION STARTING ON THE PAGE AFTER THE ANSWER SHEET UNTIL YOU ARE READY TO TAKE IT!

B. Answer Sheet: Practice Examination

Instructions: Use this answer sheet to record your answers to the Practice Examination. "Practice Examination Answer Sheet - Use Question Numbers 1-30.")

DIRECTIONS

1. Use ONLY No. 2 pencil to fill out this form.
2. Erase errors completely and cleanly.
3. Do not make stray marks on form.

Acceptable marks ● ● ● ●

Unacceptable marks ○ ◒ ⊗ ⊘ ⊙ ⊜ ⊖ ◯

EXAMINATION NUMBER →

DO NOT WRITE IN THIS BLOCK

RECORD INFORMATION BELOW COMPLETELY WITHIN SPECIFIED BLOCKS

PRINT NAME (LAST, FIRST, MI)

BIRTHDATE			TODAY'S DATE		
MONTH	DAY	YEAR	MONTH	DAY	YEAR

SIGNATURE

SOCIAL SECURITY NO.

FILL IN ANSWERS COMPLETELY

ERASE ERRORS CLEANLY

ANNOUNCEMENT NO.

RESPONSES TO ITEMS BELOW ARE VOLUNTARY

SEX

Ⓜ Ⓕ

RACIAL - ETHNIC IDENTIFICATION

- ◯ WHITE
- ◯ BLACK
- ◯ HISPANIC
- ◯ ASIAN - AMER.
- ◯ AMER. INDIAN

1 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	21 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	41 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	61 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	81 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	101 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
2 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	22 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	42 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	62 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	82 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	102 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
3 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	23 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	43 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	63 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	83 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	103 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
4 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	24 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	44 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	64 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	84 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	104 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
5 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	25 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	45 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	65 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	85 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	105 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
6 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	26 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	46 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	66 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	86 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	106 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
7 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	27 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	47 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	67 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	87 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	107 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
8 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	28 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	48 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	68 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	88 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	108 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
9 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	29 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	49 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	69 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	89 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	109 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
10 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	30 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	50 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	70 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	90 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	110 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
11 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	31 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	51 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	71 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	91 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	111 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
12 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	32 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	52 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	72 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	92 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	112 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
13 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	33 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	53 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	73 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	93 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	113 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
14 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	34 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	54 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	74 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	94 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	114 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
15 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	35 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	55 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	75 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	95 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	115 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
16 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	36 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	56 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	76 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	96 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	116 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
17 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	37 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	57 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	77 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	97 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	117 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
18 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	38 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	58 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	78 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	98 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	118 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
19 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	39 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	59 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	79 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	99 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	119 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
20 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	40 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	60 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	80 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	100 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	120 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ

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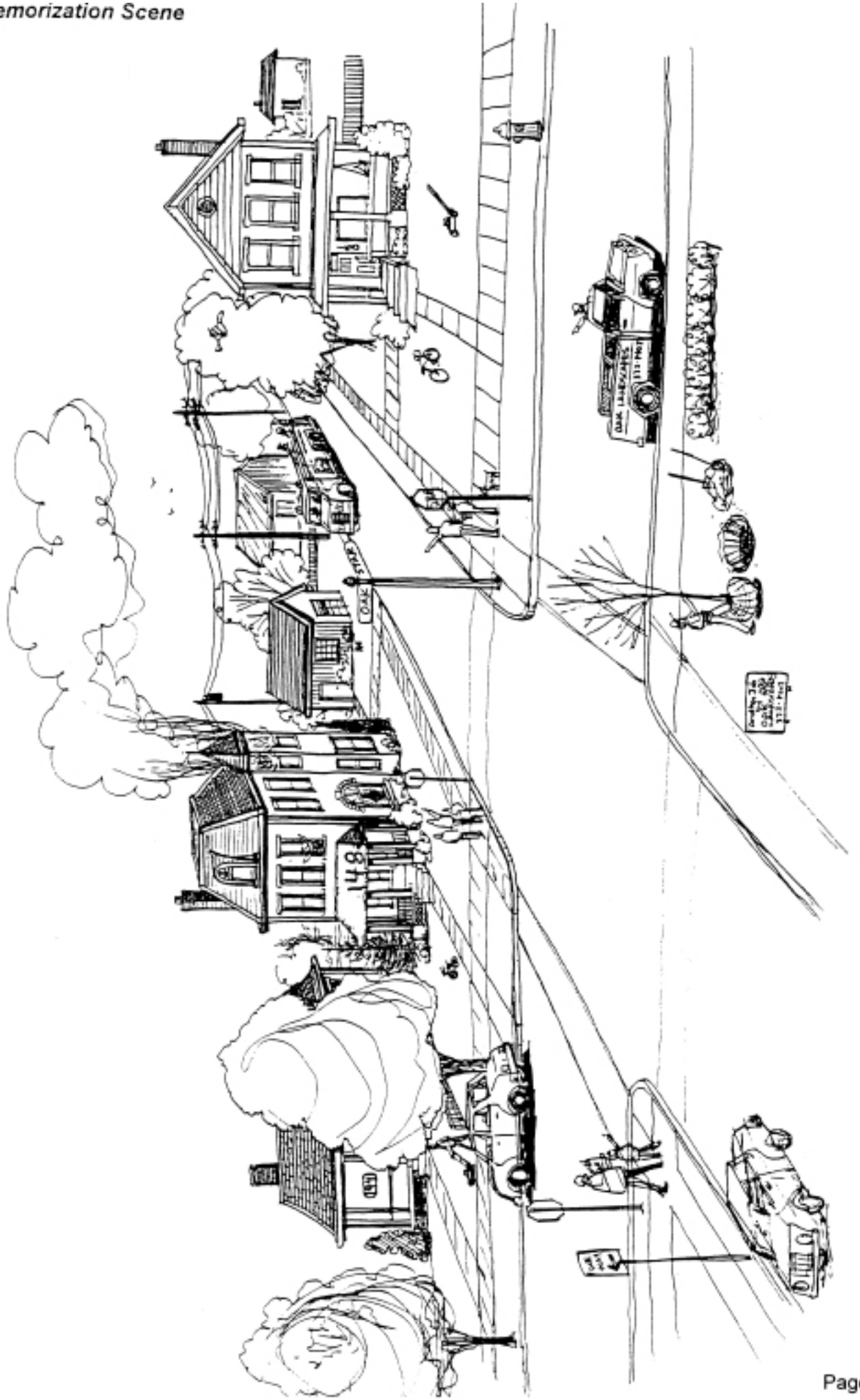
C. Memorization Scene



D. Practice Examination Questions

DO NOT <u>LOOK AT</u> THIS PRACTICE EXAMINATION UNTIL YOU HAVE REVIEWED THE STUDY GUIDE, FOLLOWED THE PRACTICE EXAMINATION INSTRUCTIONS AND ARE READY TO TAKE THE EXAMINATION.

Consider the picture you have just studied when you answer questions 1 through 5, **BUT DO NOT LOOK BACK AT THE PICTURE**.

1. The house on fire has flames coming from the windows:

   A. in the basement.
   B. on the first floor.
   C. on the second floor.
   D. on the third floor.

2. The number in the address of the house on fire is:

   A. 138.
   B. 141.
   C. 148.
   D. 151.

3. How many fire trucks appear in the picture?

   A. 0.
   B. 1.
   C. 2.
   D. 3.

4. The name of the company that appears on the pick-up truck in the picture is:

   A. Nardo Gardens.
   B. Murphy Painting.
   C. Melville Roofing.
   D. Oak Landscapes.

5. The house on fire is located at the intersection of:

   A. Oak and Star.
   B. Oak and Park.
   C. Star and Forest.
   D. Park and Forest.

Use the information in the following passage to answer questions 6 and 7:

One of the duties of emergency medical technicians (EMTs) is to know what to do if they arrive before a police officer at the scene of a suspicious or unusual death. When this occurs, the following procedures should be followed:

Four pieces of information should be obtained promptly and transmitted to the police:

1. Name of the deceased, if possible.
2. Address of the crime scene and location of the body.
3. Telephone number where EMTs can be reached.
4. Apparent cause and time of death, if known.

The duties of the first EMT at the scene also include:

1. Making sure that no objects at the scene are moved.
2. Getting names and addresses of witnesses and other people at the scene.
3. Noting the exact position of the body and the condition of the victim's clothing.

---

6. You and Firefighter Davis are the first two EMTs to arrive on the scene of a deceased person. Upon initial inspection, the circumstances surrounding the death seem suspicious, so you begin the appropriate procedures. Firefighter Davis records the victim's name, the apparent cause and time of death, the location of the body, and the address of the crime scene so that she can phone this information in to the police. In the meantime, you attempt to get the names and addresses of all bystanders. You keep watch to prevent any bystander from leaving the scene, or moving any objects at the scene, until the police arrive. Although your efforts were helpful, according to the above information, you and Firefighter Davis committed an error by:

   A. obtaining the addresses of all bystanders.
   B. failing to record any observations about the victim's clothing.
   C. failing to record the apparent cause of death.
   D. letting some of the bystanders rearrange items at the scene.

7. EMT Reese made the following call to the police from the scene of a possible homicide, "This is John Reese. I am an emergency medical technician and I am at an apartment building at 555 Allegheny Street at the scene of a possible homicide. The victim was Jeff McQuade, a 34-year old white male from River City. We found the body in the main entrance to the apartment building. Mr. McQuade apparently died of multiple stab wounds to the chest about three hours ago. If you need any further information, do not hesitate to call me back. I will remain here until one of your officers arrives."

   According to the above information, EMT Reese made an error by forgetting to mention the:

   A. victim's name.
   B. location of the body and the address at which the body could be found.
   C. telephone number where Reese could be reached.
   D. apparent cause and time of death.

---

8. During building inspections, the following conditions are often identified as dangers to the safety of the building. Therefore, owners are ordered to remove or correct these conditions:

1. Defective heating or cooking appliances.
2. Dangerous pile-ups of rubbish, waste paper, boxes, shavings, or other flammable materials.
3. Pile-ups of grease in kitchen exhaust ducts.
4. Obstructions to doors and windows that are likely to interfere with the exiting of occupants in the case of fire.
5. Overcrowded conditions caused by permitting the maximum occupancy rate to be exceeded.
6. Designated fire exits that are locked or do not work properly.

Fire Chief Cassidy recently examined the Last Chance Cafe and identified four violations from the list above: 2, 4, 5, and 6. Coincidentally, the day of the inspection was the last day of the tourist season so the owner was preparing to close the cafe and to remain closed for four months. Despite the circumstances, the Fire Chief instructed the owner to correct the one problem which would still be serious if not dealt with until the Cafe reopens in four months. Under the circumstances, the most serious problem for the vacant restaurant would be violation:

A. 2.
B. 4.
C. 5.
D. 6.

---

9. During a visit to the local elementary school, Firefighter Bennett made the following statement to the school children, “Matches are a very dangerous tool and they should not be treated as a toy.” To ensure that this statement is clearly understood, it could be stated more simply as follows:

A. “Do not think of matches as something for fun.”
B. “You can be hurt by matches.”
C. “Matches can destroy things.”
D. “Do not play with matches.”

10. Lieutenant Casey made the following statements when describing the types and characteristics of rope used in the fire department:

1. Although rope can be made of many different fibers, manila and sisal are two of the more commonly used fibers.
2. Though not as strong as manila, the sisal fiber is used more in making ropes of smaller diameter used most often by the fire department.
3. Rope is an essential item of fire equipment and is carried on all fire trucks.
4. Rope made of this manila has great strength and durability, with a minimum of stretch.

Lieutenant Casey's description would be most effective if the above statements were presented in the following order:

A. 3, 1, 4, 2.
B. 1, 4, 3, 2.
C. 3, 4, 1, 2.
D. 4, 3, 2, 1.

11. In a memo to all Division of Fire personnel, Chief Jackson made the following comments before introducing new regulations regarding firehouse behavior:

1. Behavior among the firefighters which reflects mutual respect and fellowship is essential to achieving this atmosphere.
2. Aside from the obvious decline in morale, a breakdown in internal discipline greatly increases the risk of accidents at fires.
3. A major objective of the Division of Fire is to create an atmosphere in the firehouse that is conducive to safe and effective firefighting.
4. Firefighters refusal to share meals together leads to a breakdown in the maintenance of internal discipline.
5. For this reason, the Division sets forth regulations regarding communal activities (e.g., meals) that take place in the firehouse.

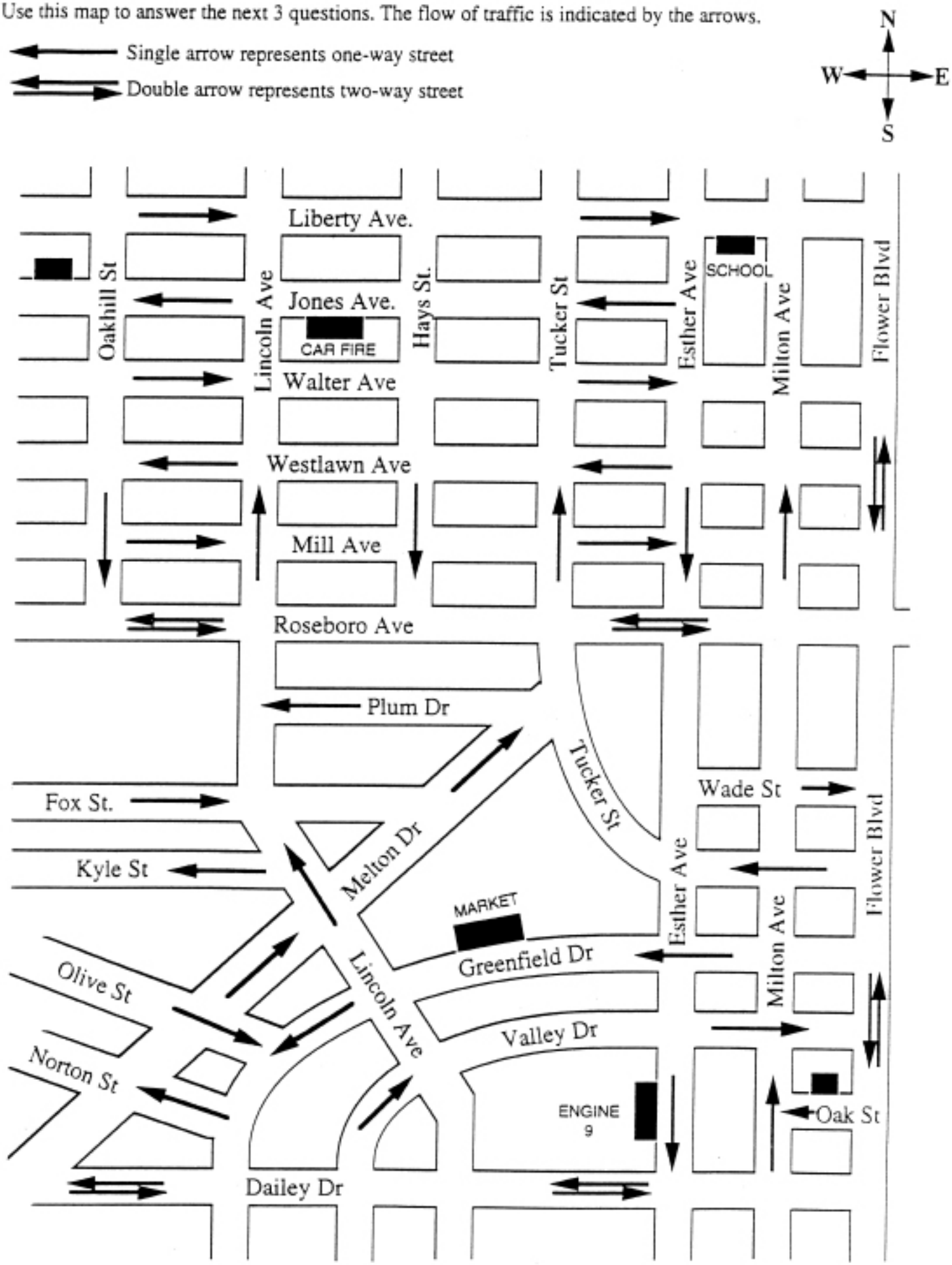
The above comments could be made most effectively if they were presented in the following order:

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

Use this map to answer the next 3 questions. The flow of traffic is indicated by the arrows.

Single arrow represents one-way street

Double arrow represents two-way street



12. Firefighters at Engine Company 9 are dispatched to respond to a fire at a market on Greenfield Dr. (between Lincoln Ave. and Esther Ave.). According to the map on the previous page, the most direct route to the fire without breaking any traffic laws is to travel south on Esther Ave., then go:

    A. west on Greenfield Dr. to the fire.
    B. west on Dailey Dr., northwest on Lincoln Ave., and northeast on Greenfield Dr. to the fire.
    C. east on Dailey Dr., north on Flower Blvd., and west on Greenfield Dr. to the fire.
    D. east on Dailey Dr., north on Milton Ave., and west on Greenfield Dr. to the fire.

13. Firefighters at Engine Company 9 are dispatched to respond to a car fire on Jones Ave. (between Lincoln Ave. and Hays St.). According to the map on the previous page, the most direct route to the fire without breaking any traffic laws is to travel:

    A. south on Esther Ave., west on Dailey Dr., northwest and then north on Lincoln Ave., and east on Jones Ave. to the fire.
    B. south on Esther Ave., west on Dailey Dr., northeast on Melton Dr., north on Tucker St., and west on Jones Ave. to the fire.
    C. south on Esther Ave., west on Dailey Dr., northwest on Lincoln Ave., northeast on Melton Dr., north on Tucker St., and west on Jones Ave. to the fire.
    D. north on Esther Ave. and west on Jones Ave. to the fire.

14. Firefighters in Engine Company 9 are returning to the station after putting out a trash fire when they are dispatched to respond to a fire in an apartment building. They were located at the intersection of Esther Ave. and Valley Dr. when they received the call. They were given the following directions to get to the scene of the fire: travel east for 2 blocks, then turn north and travel for 6 blocks, then turn west and travel for 3 blocks, and finally turn north and travel 1 block to the fire. Given these directions, according to the map on the previous page, the apartment building on fire must be situated closest to the intersection of:

    A. Hays St. and Walter Ave.
    B. Jones Ave. and Esther Ave.
    C. Tucker St. and Walter Ave.
    D. Esther Ave. and Westlawn Ave.

Use the information in the following passage to answer questions 15 and 16.

Any firefighter must be able to identify the severity of a victim's burns to ensure that proper medical attention can be given. In order to classify burns, several important factors must be taken into consideration including the location and extent of the burned surface and the victim's age. These factors are represented in the chart presented below. (All numbers represent percentage of total skin surface.)

VICTIM'S AGE	LOCATION OF BURNS	PERCENTAGE OF BURNED SKIN SURFACE
Infant	Head	18
	Chest & Abdomen	18
	Back & Buttocks	18
	Left arm	9
	Right arm	9
	Left leg	14
	Right leg	14
Five-year-old	Head	14
	Chest & Abdomen	18
	Back & Buttocks	18
	Left arm	9
	Right arm	9
	Left leg	16
	Right leg	16
Adult	Head	9
	Chest & Abdomen	18
	Back & Buttocks	18
	Pelvis	1
	Left arm	9
	Right arm	9
	Left leg	18
	Right leg	18

Remember to refer back to the above factors as you answer questions 15 and 16.

---

15. A five-year-old child was completely burned on both of her legs and her left arm during a fire in her grandparent's home. According to the factors listed above, the percentage of the child's total skin surface which was burned was about:

A. 30.
B. 35.
C. 40.
D. 45.

Remember to refer back to the factors listed on the previous page as you answer question 16.

16. Consider the burn victims described below:

VICTIM 1: An adult male who is burned on his chest & abdomen, back & buttocks, and left arm.
VICTIM 2: An infant girl who is burned on her back & buttocks, and both legs.
VICTIM 3: A middle-aged woman who is burned on her head, back & buttocks, and both arms.
VICTIM 4: A five-year-old boy who is burned on both arms and both legs.

According to the factors listed on the previous page, the victim with the most severe burn (in terms of the highest percentage of skin surface damaged) is victim number:

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

Use the information in the following passage to answer questions 17 and 18:

Operations conducted by fire personnel at fire-related incidents include evacuation procedures. Evacuation procedures are designed to remove fire personnel from situations in which their lives are threatened. These procedures are of three types:

Type 1: Emergency Evacuation - This type of evacuation procedure is used in incidents involving such events as the potential collapse of a structure or hazardous materials. All fire personnel inside the involved building or area will immediately evacuate the involved building or area, leaving all equipment in place.

Type 2: Tactical Withdrawal - This type of evacuation procedure is used when going from an offensive (interior attack) to a defensive (exterior attack) strategy. All fire personnel inside the involved building or area will evacuate the involved building or area with all equipment.

Type 3: Sector Withdrawal - After the use of an Emergency Evacuation or Tactical Withdrawal, all fire personnel shall be outside the involved building or area. However, conditions may be hazardous enough to require complete withdrawal from an entire sector (larger area). If so, this type of evacuation procedure is used. If possible, fire trucks (with all personnel aboard) shall immediately leave the sector by a safe route, leaving all equipment behind. Fire truck radios are then to be monitored for further orders.

---

17. Consider the following situation: Firefighters had been fighting a fire at a five-story office building for a half-hour. Despite their efforts, the building was soon engulfed in flames and several firefighters were forced to leave the building. The Commander in charge of the incident ordered all firefighters to evacuate the building with their equipment and to wait for further instructions regarding an external attack on the building. According to the above information, this situation best represents a(n):

    A. Tactical Withdrawal.
    B. Tactical Withdrawal followed by a Sector Withdrawal.
    C. Emergency Evacuation.
    D. Emergency Evacuation followed by a Sector Withdrawal.

18. Assume that a railroad car carrying toxic chemicals overturned and exploded into flames just outside the town of Melville. Firefighters from District 5 responded to the incident. Upon discovering that the fire was caused by the explosion of toxic chemicals, the District Chief ordered all personnel in the area to evacuate immediately and to leave any equipment in place. Since the incident involved toxic chemicals, the District Chief then ordered all fire trucks to leave the sector with all personnel. He also took steps to notify residents in the surrounding area of the incident and possible need for evacuation. The District Chief instructed personnel to monitor their radios for further orders. According to the above information, this situation best represents a(n):

    A. Tactical Withdrawal.
    B. Tactical Withdrawal followed by a Sector Withdrawal.
    C. Emergency Evacuation.
    D. Emergency Evacuation followed by a Sector Withdrawal.

Use the information in the following passage to answer questions 19 and 20:

The following procedures are used to put out fireplace fires that get out of control. They are listed in the order in which they must be performed:

1) In order to prevent damage to the room, stretch a canvas cover in front of the fireplace if the fire has not spread to the inside of the room.
2) Use a small hose line or water fire extinguisher to put out the fire in the fireplace.
3) Find out if the fire has extended to the inside of the walls.
4) Make sure the small hose line or extinguisher is ready for further use.
5) If fire is inside the walls, ceilings or floors, tear them open.
6) Use the small hose line or water fire extinguisher to put out any fire found in the walls, ceilings or floors.

---

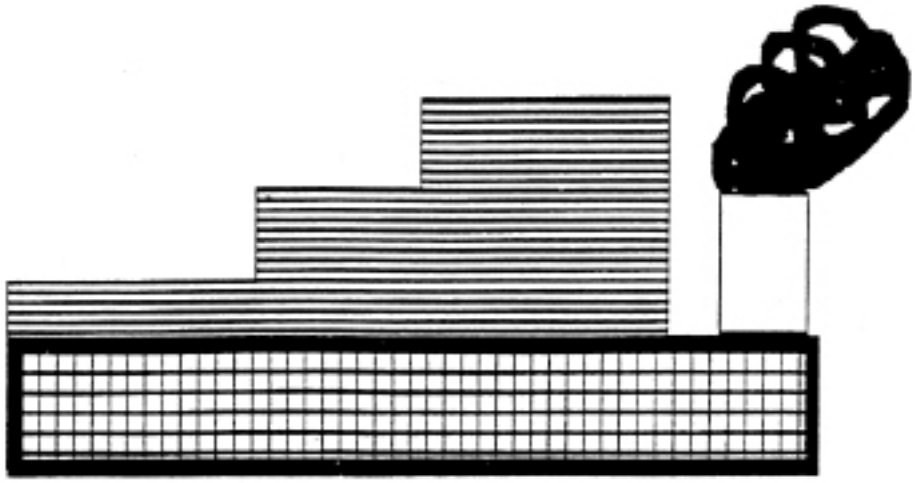
19. Firefighters are at the scene of an uncontrolled fireplace fire. They have followed proper procedure and have just found that the fire has extended into the wall. According to the above information, the next step the firefighters should take is to:

A. tear open the wall with axes.
B. put out the fire in the fireplace.
C. put out the fire in the wall.
D. make sure the necessary equipment is ready for use.

20. Firefighters are at the scene of an uncontrolled fireplace fire. The fire has NOT spread to the inside of the room, so a canvas cover has been stretched in front of the fireplace. According to the above information, the next step the firefighters should take is to:

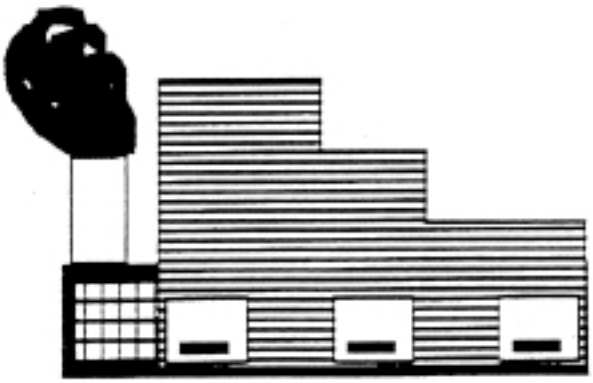
A. determine if fire has extended into the walls, ceilings, or floors.
B. tear open the walls, ceilings, and floors.
C. put out the fire in the walls, ceilings, and floors.
D. put out the fire in the fireplace.

21. Use the drawing shown below to answer this question.

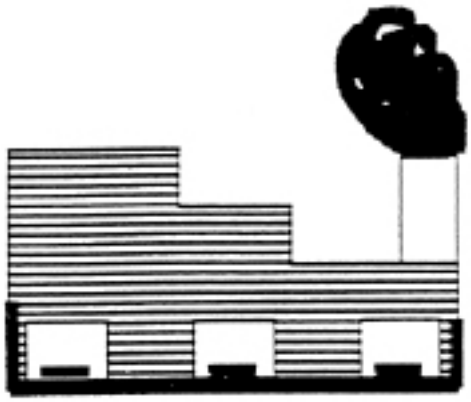


Shown above is a factory as seen from the front. From the back, this factory would look like:

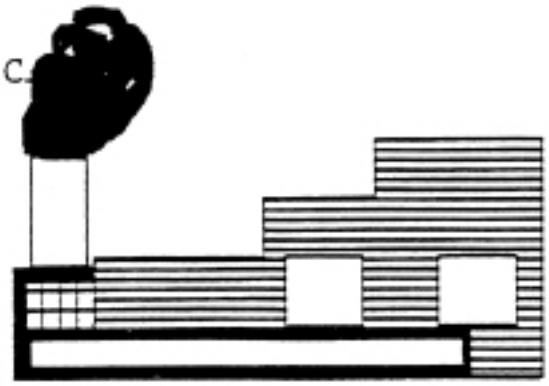
A.



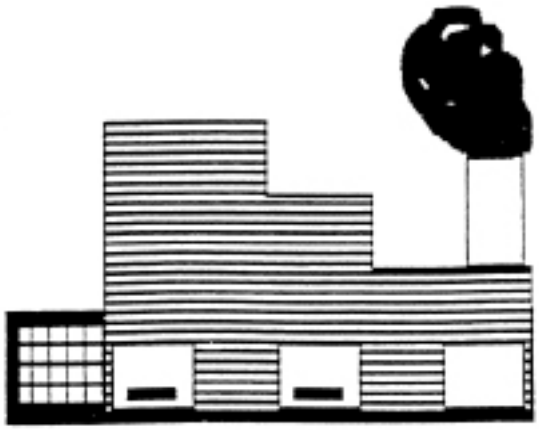
B.



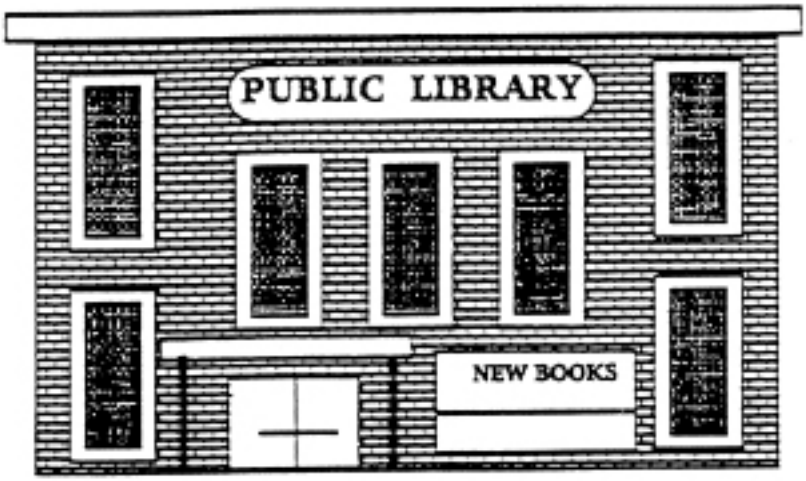
C.



D.

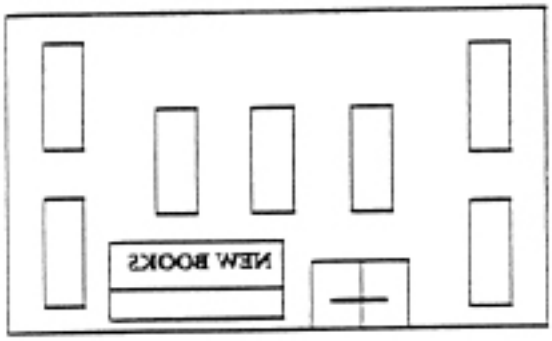


22. Use the drawing shown below to answer this question.

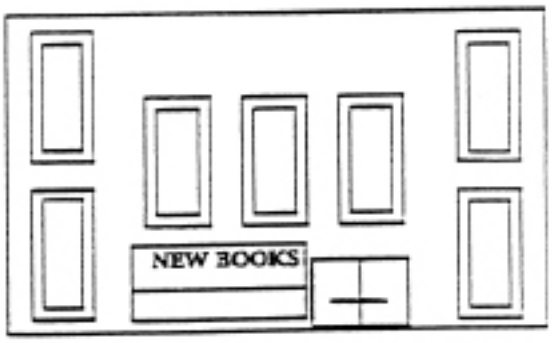


Shown above is the front of a library as seen from the outside. If you were facing the front of this library from the inside, it would look like:

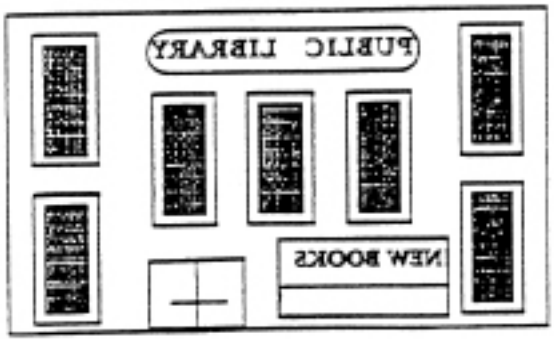
A.



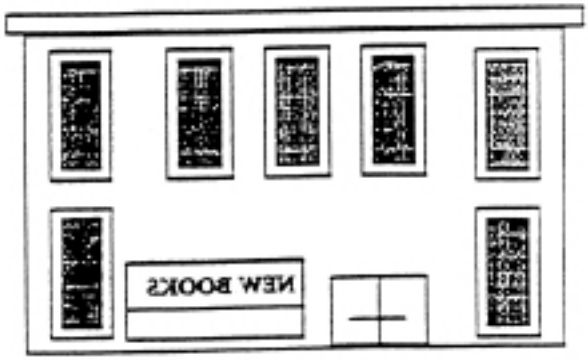
B.



C.



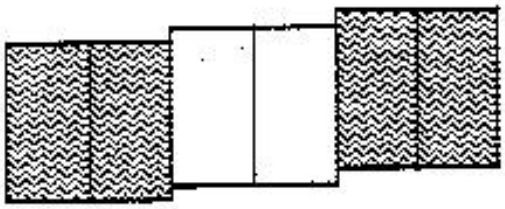
D.



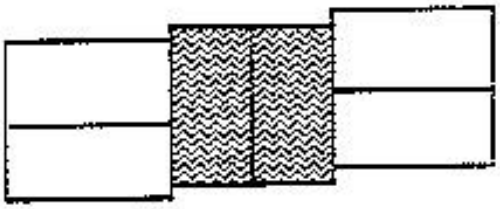
23. Use the drawing shown below to answer this question.

Shown above is the front of a group of townhouses as seen at ground level. If you were situated on a 75-foot ladder above these townhouses, they would look like:

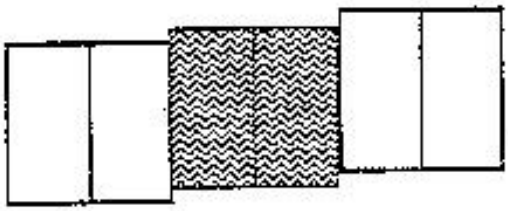
A.



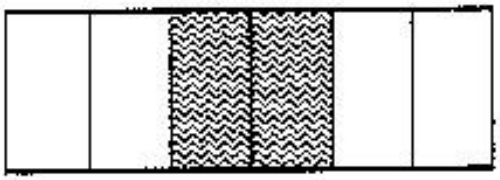
B.



C.



D.



24. Three fires took place near the Bay Housing Project over a three-week period. All three fires are assumed to be the work of arsonists because, in all three cases, a suspect was spotted running from the residence on fire. The description of each suspect is as follows:

Fire #1. (April 8) - male, white, teenager, 5'5", 175 pounds, tattoo on upper left arm, short-sleeved grey shirt, black pants and black shoes.

Fire #2. (April 14) - male, white, teenager, 5'5", 145 pounds, white cowboy hat, large scar directly over eyebrow, short-sleeved shirt, blue pants, and black shoes.

Fire #3. (April 22) - male, white, teenager, 5'5", 140 pounds, short brown hair, large-sized sunglasses, short-sleeved blue shirt, blue jeans and black sneakers.

On April 24, a fourth fire occurred near the Bay Housing Project and a suspect is spotted once again. The description of the suspect is as follows:

Fire #4. (April 24) - male, white, teenager, 5'5", 143 pounds, short brown hair, large scar directly over eyebrow, short-sleeved grey shirt, black pants and black shoes.

Based upon the description of the suspects in the first three fires, the suspect in Fire #4 should also be considered a suspect in which fire(s)?

A. #2 only.
B. #1 and #2 only.
C. #2 and #3 only.
D. #1, #2, and #3.

25. Some firefighting equipment is listed and defined below:

1) Backboard - A sturdy piece of board used to prevent injured victims from moving before they are transported.
2) Stretcher - A portable cot on wheels used to transport injured or ill victims.
3) Gasoline Circular Saw - a gasoline engine equipped with blades which is used to cut masonry, steel, etc.
4) Gasoline Hydraulic Hurst Tool - a tool powered by a hydraulic gasoline engine and connected to a pump by a high pressure hose. Used to quickly remove steering wheels, doors, etc. on autos in order to free occupants.
5) Gasoline Handy-Billy - a pump powered by a gasoline engine that is used to draw water from pools, ponds, etc. to put out fires in remote locations or where no other water is available.
6) Oxy-Acetylene Cutting Torch - a device that is used to speed entry (or cut) through steel doors or windows, and in rescue operations involving vehicles, machinery, etc.

According to the above information, a gasoline circular saw, gasoline hydraulic Hurst tool, and oxy-acetylene cutting torch are similar in that they help firefighters to:

A. remove heat, smoke and fumes from the fire area.
B. move victims at the emergency scene.
C. force entry into automobiles, buildings, or equipment.
D. supply electricity to equipment used at the emergency scene.

26. Consider the following information about the hospitals located in Middle County:

HOSPITAL NAME	DISTANCE FROM RENOVA	DISTANCE FROM HATFIELD	DISTANCE FROM HIGHTOWN	ADMITTANCE LIMITATIONS
Alpha	30 miles	65 miles	8 miles	No Obstetrics or children (under 18)
Beta	25 miles	45 miles	22 miles	None
Sigma	11 miles	28 miles	51 miles	No children (under 18)

Over the last 48 hours, ambulances responded to four calls in Middle County. The table below provides some information about each of these calls, including the hospital to which each patient was taken.

LOCATION	AGE OF PATIENT	TYPE OF PATIENT	HOSPITAL REQUESTED BY PATIENT	HOSPITAL TO WHICH PATIENT WAS TAKEN
Hatfield	37	Psychiatric	None	Sigma
Hightown	40	General	Beta	Beta
Hatfield	6	General	None	Beta
Renova	20	Obstetrics	Alpha	Sigma

Given the information provided in the above tables, the statement that most accurately reflects Middle County's policy with regard to patients who request specific hospitals must be that patient requests are:

A. ALWAYS honored.
B. NEVER honored.
C. honored ONLY if the requested hospital admits such patients.
D. honored ONLY if the requested hospital happens to be the closest hospital.

Use the information in the following passage to answer questions 27 and 28.

At 2:30 A.M. on Saturday, Engine Companies 7 and 12 responded to a call from Mrs. Farrell, an elderly woman living in Cedarbook Townhouses, apartment number 731. Upon arrival at Mrs. Farrell's home, Lieutenant Decker noticed no flames or smoke, but smelled a strong burning odor. Lieutenant Decker asked Mrs. Farrell how long she had smelled the odor and if there were any other occupants in her apartment. Mrs. Farrell stated the odor woke her up at 2:15 A.M., just before she called the fire department, and that she lived alone. Lieutenant Decker sent Firefighters Farber and Fulton to investigate the source of the odor. As soon as they entered the living room, dark smoke began to seep up through the heating grates on the floor so they went down to the basement to investigate. Lieutenant Decker took Mrs. Farrell to one of the vehicles outside and sent two other firefighters to awaken and evacuate the individuals in the surrounding townhouse apartments. Upon entering the basement, Firefighters Farber and Fulton immediately discovered the source of the fire. Some old wooden furniture had been stored too close to the furnace and had caught on fire. Firefighter Farber began to put out the flames with the fire extinguisher he had carried in with him. Firefighter Fulton went outside to get additional help.

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27. According to the above information, Mrs. Farrell called the fire department because she awoke to:

    A. the sight of flames.
    B. the sight of smoke.
    C. the sound of sparks.
    D. a burning odor.

28. According to the above information, the fire started in:

    A. the heating duct which led into the living room.
    B. some old furniture stored in the basement.
    C. Mrs. Farrell's bedroom.
    D. the furnace.

Use the following passage to answer questions 29 and 30:

It is standard operating procedure to conduct a primary search in all residences that are on fire, or threatened by fire, if the residences can be entered safely. Primary search means firefighters quickly go through all affected areas to ensure the removal or safety of all occupants. Time is the critical factor in the primary search process.

The rescue procedures that are performed after steps have been taken to control the fire are called secondary search procedures. Secondary search means that firefighters thoroughly search the interior of the fire area after initial activities have been conducted to control and ventilate the fire. Thoroughness rather than time is the critical factor in secondary search.

In the case of a very minor fire that clearly poses no hazard to life, a rapid interior search is conducted and “all clear” is reported. In the case where smoke is seen or there is an active fire, efforts to control the fire and rescue occupants are both conducted at the same time in order to gain entry into the structure for a primary search. The primary search is then followed by a secondary search. In the case of a building that is completely engulfed in smoke and flames, the survival of occupants becomes unlikely. In this case, as soon as the fire is under control, a secondary search is made for victims.

Firefighters cannot depend on reports from spectators to determine the exact location, number and condition of victims. Rather, such information is used only to support search efforts.

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29. According to the above information, in the case of a fire where the whole building is engulfed in flames, the type of search that should be conducted as soon as the fire is under control is:

    A. a primary search.
    B. a secondary search.
    C. a primary search followed by a secondary search.
    D. no search since the survival of occupants is unlikely.

30. The difference between a primary and secondary search is that:

    A. during the primary search, spectators can be depended upon to provide accurate information such as the specific location, number, and condition of victims.
    B. during the secondary search, spectators can be depended upon to provide accurate information such as the specific location, number, and condition of victims.
    C. in a secondary search, time is the most important factor, while in a primary search thoroughness is the most critical factor.
    D. in a primary search, time is the most important factor, while in a secondary search thoroughness is the most critical factor.

E. Error Analysis Form: Practice Examination

	ABILITY AREA	✓ IF CORRECT	✓ NUMBER OF REASON FOR CHOOSING INCORRECT RESPONSE (from the reasons given in Section IC beginning on page 5)						
			1	2	3	4	5	6	7
1	MEMORIZATION								
2	MEMORIZATION								
3	MEMORIZATION								
4	MEMORIZATION								
5	MEMORIZATION								
6	PROBLEM SENSITIVITY								
7	PROBLEM SENSITIVITY								
8	PROBLEM SENSITIVITY								
9	VERBAL EXPRESSION								
10	VERBAL EXPRESSION								
11	VERBAL EXPRESSION								
12	SPATIAL ORIENTATION								
13	SPATIAL ORIENTATION								
14	SPATIAL ORIENTATION								
15	DEDUCTIVE REASONING								
16	DEDUCTIVE REASONING								
17	DEDUCTIVE REASONING								
18	DEDUCTIVE REASONING								
19	INFORMATION ORDERING								
20	INFORMATION ORDERING								
21	VISUALIZATION								
22	VISUALIZATION								
23	VISUALIZATION								
24	INDUCTIVE REASONING								
25	INDUCTIVE REASONING								
26	INDUCTIVE REASONING								
27	VERBAL COMPREHENSION								
28	VERBAL COMPREHENSION								
29	VERBAL COMPREHENSION								
30	VERBAL COMPREHENSION								
TOTAL # QUESTIONS CORRECT									
TOTAL # QUESTIONS ANSWERED **INCORRECTLY** FOR EACH REASON LISTED IN SECTION IC									

F. Practice Examination Answers/Explanations

The answers to the Practice Examination are listed below. Explanations of the answers follow this list.

1. C	6. B	11. B	16. D	21. A	26. C
2. C	7. C	12. D	17. A	22. A	27. D
3. B	8. A	13. C	18. D	23. C	28. B
4. D	9. D	14. C	19. D	24. C	29. B
5. A	10. A	15. C	20. D	25. C	30. D

Memorization questions - 1, 2, 3, 4, and 5. These questions are based on the memorization picture provided. The answers can be explained by looking back at the memorization picture.

Problem Sensitivity questions - 6, 7, and 8.

6. B is the correct answer. The procedures recommend that the first EMTs on the scene note "the exact position of the body and the condition of the victim's clothing." (See step 3.) In the description of the incident, there was no indication that the victim's clothing was examined.

   A is incorrect because there is nothing wrong with obtaining the addresses of all bystanders. In fact, this is recommended in the procedures presented in the passage.

   C is incorrect because the description of the incident reveals that the EMTs did record the apparent cause of death. ("Firefighter Davis records…the apparent cause and time of death….")

   D is incorrect because there was no indication, in the description of the incident, that the EMTs allowed bystanders to rearrange items at the scene. In fact, the description indicates that the EMTs "kept watch to prevent any bystander from ... moving any objects at the scene, until the police arrive."

7. C is the correct answer. Without the phone number where Reese could be reached, the police would have no way of getting back to him.

   A, B, and D are all wrong because EMT Reese provided all of these details when he called the police.

8. A is the correct answer. All other violations involve conditions that would make it difficult for customers to exit the restaurant in the event of fire. Since the restaurant is to be closed for four months, these conditions pose no immediate danger and need not be corrected until just before the restaurant reopens. In contrast, Violation B--dangerous pile-ups of rubbish, waste and other flammable materials--pose a danger regardless of whether or not the restaurant is occupied because such materials could catch on fire at any time.

Verbal Expression questions - 9, 10, and 11.

9. D is the correct answer. It correctly reflects the meaning of the original statement in its simplest form.

A is similar in meaning to the correct answer but the correct answer is a little more brief and to the point.

B and C do not include the notion of using matches as a toy or plaything, so they do not provide a complete representation of the original statement.

10. The correct answer is A. There are a number of factors important to answering this question correctly. The clearest clues involve statements 4 and 2.

Statement 4 indicates that rope made of manila has great strength and durability. Thus, this statement must follow a statement that introduces the materials of which rope is made.

Statement 1 introduces manila and sisal as the kinds of fibers of which rope is made, so statement 1 must precede statement 4.

Statement 2 begins “Though not as strong as manila...” Therefore, statement 2 must follow a statement about the strength of manila. Statement 4 talks about the strength of manila, so 2 must follow 4.

Alternatives C and D do not represent this order, so they are incorrect. Alternatives A and B differ in their placement of statement 3. Alternative B places statement 3 between statements 4 and 2, which are closely related. Statement 3 makes a better introductory statement, as indicated in the correct answer, A.

11. The correct answer is B. Since a reference is made to “this atmosphere” in statement 1, it must immediately follow a statement which discusses the atmosphere in the firehouse.

Statement 3 is the only statement that does this. The only alternative in which statement 1 follows statement 3 is B.

Further, statement 2 should be presented immediately after statement 4 because of the discussion of the “breakdown in internal discipline.” Again, the only alternative where this occurs is B.

Spatial Orientation questions - 12, 13, and 14.

12. D provides the most direct route to the fire without breaking any traffic laws.

A is incorrect because it suggests the firefighter travel in the wrong direction (i.e., north) on Esther.

B is incorrect because it suggests the firefighter travel in the wrong direction (i.e., northeast) on Greenfield.

C is incorrect because it suggests a less direct route to the fire than that suggested in the correct answer - D.

13. C provides the most direct route to the fire without breaking any traffic laws.

A is incorrect because it suggests the firefighter travel in the wrong direction (i.e., east) on Jones.

B is incorrect because it suggests a less direct route to the fire than that suggested in the correct answer - C.

D is incorrect because it suggests the firefighter travel in the wrong direction (i.e., north) on Esther.

14. The correct answer is C, Tucker Street and Walter Avenue.

Deductive Reasoning Questions - 15, 16, 17, and 18.

15. C is the correct answer. According to the factor shown for a 5 year old, burns on both legs (32) and one arm (9) would amount to 41 percent of the child's total skin surface. Thus, 40 is the best answer. Candidates may have chosen alternative D if they mistakenly referred to the factor for an adult since two legs (36) and one arm (9) would amount to 45 percent of an adult's skin surface. If candidates mistakenly referred to the factor for an infant, they might have chosen alternative B since two legs (28) and one arm (9) amount to 37 percent of an infant's skin surface.

16. D is the correct answer. The total percentages of skin surface burned are calculated for each victim below:

1.	Chest and abdomen (18), back and buttocks (18), left arm (9)	45%
2.	Back and buttocks (18), both legs (28)	46%
3.	Head (9), back and buttocks (18), both arms (18)	45%
4.	Both arms (18), both legs (32)	50%

17/18. The key to questions 17 and 18 is to identify the various ways in which the classes of evacuation procedures differ. The ways in which the evacuation procedures differ include:

I. The type of situation in which the procedure tends to be used.
II. Whether or not equipment is to be left in place.
III. Whether or not the procedure is typically used after another evacuation procedure or can be performed by itself.

Each type of evacuation procedure is outlined below in terms of these 3 differences:

Emergency Evacuation Procedures

I. Used in situations involving a potential structure collapse or hazardous materials.
II. All equipment is left in place.
III. This procedure can be conducted by itself.

Tactical Withdrawal Procedures

I. Used in situations in which an offensive (interior attack) is being replaced by a defensive (exterior attack) strategy.
II. Personnel take all equipment with them.
III. This procedure can be conducted by itself.

Sector Withdrawal Procedures

I. Used in situations that are so hazardous they require complete withdrawal.
II. All equipment is left behind.
III. This procedure is used after an emergency evacuation or a tactical withdrawal.

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17. The correct answer is A. The incident involved a change from an internal attack to an external attack. Firefighters were instructed to take all equipment with them when withdrawing. No additional evacuation procedures were conducted before or after this one. This incident is best classified as a Tactical Withdrawal.

18. The correct answer is D. The incident was a fire involving hazardous materials. Firefighters were instructed to evacuate the area immediately and to leave all equipment in place. This part of the incident is best classified as an emergency evacuation. Due to the nature of the incident, firefighters were further ordered to leave the area on the fire trucks and to monitor their radios for further orders. This part of the incident is best classified as a Sector Withdrawal.

Information Ordering questions - 19 and 20.

19. The correct answer is D. The key phrase in this question is “have just found that the fire has extended into the wall.” This represents step 3 in the set of procedures so the next step which must be followed is step 4. Step 4 involves making sure the necessary equipment (small hose line or extinguisher) is ready for use.

    The incorrect alternative that is probably most likely to be chosen is A: “tear open the wall with axes.” This alternative represents step 5 in the set of procedures. It may seem to make sense to tear open the wall once it has been discovered that the fire has extended into the wall. However, it is important that firefighters first check to ensure that they are prepared to put out any fire that will be uncovered. That is why it is important that they perform step 4 before step 5. The instructions for this question clearly indicate that the procedures are listed in the order in which they must be performed.

20. The correct answer is D. The key phrase in this question is “a canvas cover has been stretched in front of the fireplace.” This represents step 1 in the set of procedures, so the next step which must be followed is step 2. Step 2 involves using a small hose line or water fire extinguisher to put out the fire in the fireplace.

Visualization questions - 21, 22, and 23.

21. The correct answer is A. Since the initial object (the factory) is to be viewed from the back, attention should be focused on those things that can be seen from both the front and back. This includes the chimney, smoke, and the shape (or sections) of the factory. Since the factory is to be viewed from the back, these things should appear in the reverse or opposite position in the answer. Things that cannot be seen from both the front and back should be ignored, such as any windows and doors on the initial factory or the factories shown in the alternatives.

    B is incorrect because the chimney appears in the same position as in the initial factory, instead of being reversed as in correct alternative A.

    C is incorrect because the main portion of the factory appears in the same position as in the initial factory, rather than being reversed.

    D is incorrect because, as in B, the chimney appears in the same position as in the initial factory, instead of being reversed.

22. The correct answer is A. Since the library is to be viewed from the inside, attention should be focused on those things that can be seen from both the outside and the inside. This includes the windows, doors, doorknobs, and any lettering that can be assumed to be written on glass. Such lettering should appear in reverse when the library is viewed from the inside. Such things as the roof, the pattern of the brick on the outside of the library, and the overhang over the front door of the library should be ignored, since they cannot be seen from the inside.

    B is incorrect because the words “New Books” appear in the same position as in the initial library. These words should appear in reverse position, as in correct alternative A.

    C is incorrect because the double doors and the window that contains the words “New Books” appear in the same position as in the initial library. Again, these portions of the library should appear in reverse position when being viewed from inside. (See correct alternative A.)

    D is incorrect because the windows do not appear in the correct positions. The middle three windows should appear lower down on the front of the library.

23. C is the correct answer. Since the townhouses are to be viewed from above, attention should be focused on those things that can be seen from both the front and above. The roof lines and color or pattern of the roof can be seen from the front and the top. Also, the way the townhouses are positioned in relation to one another is relevant. The windows and doors should be ignored since they cannot be seen from above.

    A is not correct because the color or pattern of the roofs is wrong. The center roof should have a design and the remaining roofs should appear white (see correct alternative C).

    B is not correct because the townhouses on the left and right are drawn with horizontal rather than vertical rooflines.

    D is not correct because the townhouses are not positioned correctly. The initial picture indicates that the townhouses are staggered in their alignment. Alternative D shows the townhouses as though the front faces were in a straight line right next to one another.

Inductive Reasoning questions - 24, 25, and 26.

24. When comparing suspects in questions like this, candidates should focus on those features that cannot be changed easily. This includes sex, race, age, height, weight, and distinguishing characteristics. (Since we are dealing with witnesses' descriptions, there may be minor differences in separate descriptions of the same suspect. Therefore, it should not be assumed that we are dealing with different suspects if the descriptions differ slightly in age, height, or weight.) Features that can be changed relatively easily should be ignored when comparing suspects. Such features include hair and hair color, facial hair, and clothes.

    C is the correct answer. Suspects for Fire #s 2, 3, and 4 have roughly the same "unchanging" features: sex = male, race = white, age = teenager, height = 5'5", weight = 140-145 pounds, distinguishing characteristics = large scar directly over eyebrow.

    Although the description of the suspect for Fire #3 does not include the scar, the suspect is reported to have been wearing large sunglasses which easily could have hidden the scar. Thus, Fire #s 2, 3 and 4 may all involve the same suspect.

    For a number of reasons, the description of the suspect for Fire #1 suggests that a different person is involved in this fire. First, the reported weight is 175 pounds instead of 140-145 pounds. It is difficult to believe that the same suspect could be described so differently in terms of weight. Furthermore, there is no mention of a large scar over the eyebrow. Finally, the suspect for Fire #1 was described as having a tattoo on his upper left arm. Such a tattoo was not noticed on the suspect for Fire #4 or any of the other fires.

25. C is the correct answer. All three tools listed in this question are used to enter (or cut through) structures and/or to free occupants. The key words are "used to cut masonry, steel, etc." (circular saw), "used to remove steering wheels, doors, etc. on autos in order to free occupants" (Hurst tool), and "used to speed entry (or cut) through steel doors or windows and in rescue operations" (torch).

    A and D are incorrect because they both describe functions that are not served by any of the equipment listed in the passage. The type of equipment that performs the function described in alternative A is an electric fan and the type of equipment that performs the function described in alternative D is an electric generator.

    B is incorrect because it describes the function served by a stretcher.

26. C is the correct answer. Neither A nor B can be correct because, of the two requests which were made (Beta by caller 2 and Alpha by caller 4), only the first request was granted. Therefore, it would be wrong to say that patient requests are ALWAYS (alternative A) or NEVER (alternative B) honored.

Alternatives C and D provide possible reasons why requests might not be honored. Alternative D suggests that patient requests are honored only if the requested hospital is the closest hospital. Caller 4 requested Alpha Hospital and was transported to Sigma. According to the information in the table, Alpha is the furthest hospital from the city in which the caller was located (Renova) and Sigma is the closest. Thus, a candidate might conclude that D is the correct response. However, caller 2 was transported to the requested hospital (Beta) even though it was not the closest hospital that would accept him. The closest hospital that would have accepted him was Alpha. Thus, the conclusion described in alternative D cannot be correct.

The correct conclusion is C—patient requests are honored only if the requested hospital admits such patients. This conclusion explains why caller #4 was not taken to the requested hospital. That is, caller #4 was an obstetrics case and the hospital that caller #4 requested (Alpha) does not take obstetrics cases. In addition, the conclusion stated in alternative C also fits with the other patient request situation. Caller #2 was a general case who requested Beta hospital. Since Beta has no admittance limitations, the request was honored.

Verbal Comprehension questions - 27, 28, 29, and 30.

27. D is the correct answer. As stated in the passage, “Mrs. Farrell stated the odor woke her up at 2:15 A.M., just before she called the fire department .. . “

Alternative C is incorrect because there was no mention of sparks in the passage.

Alternatives A and B are incorrect. Although smoke and flames may have been seen, this occurred only after the firefighters had begun to investigate the source of the odor reported by Mrs. Farrell. The question asked what awoke Mrs. Farrell and caused her to call the fire department. As noted above, Mrs. Farrell awoke to an odor just before she called the fire department.

28. B is the correct answer. The question asked where the fire started. As stated in the passage, “Firefighters Farber and Fulton immediately discovered the source of the fire. Some old wooden furniture had been stored too close to the furnace and had caught on fire.”

A is incorrect. Smoke from the burning furniture did get into the heating duct and travel up through the grates in the living room. However, the duct and grates were simply the first places where smoke from the fire was noticed. The fire did not start in the duct.

C is incorrect because there is no mention of fire or smoke in Mrs. Farrell’s bedroom at any point in the passage. However, since Mrs. Farrell awoke to the smell of smoke, some firefighters may incorrectly assume that the fire started in Mrs. Farrell’s bedroom.

D is incorrect. The wooden furniture caught on fire because it was stored too close to the furnace. However, the fire did not start in the furnace. It started in the furniture.

29. B is the correct answer. The third paragraph of the passage clearly states, “In the case of a building that is completely engulfed in smoke and flames, the survival of occupants becomes unlikely. As soon as the fire is under control, a secondary search is made for victims.” This suggests that no primary search is conducted in the case of a building that is completely engulfed because it is unlikely that occupants can be saved. Initial efforts instead should be directed toward controlling the fire after which a secondary search should be conducted for victims.

A and C are not correct because the portion of the passage quoted above suggests that a primary search is not conducted at any point in time for a building that is completely engulfed in flames.

D is only partially correct. The portion of the passage quoted above suggests that no primary search is conducted because “the survival of occupants is unlikely.” The passage goes on to say that a secondary search should be conducted once the fire is under control. Thus, it is not correct to say that “no search is conducted,” only that “no primary search is conducted.”

30. D is the correct answer. This answer is clearly supported by statements which are made in paragraphs 1 and 2 of the passage: “Time is the critical factor in the primary search process.” and “Thoroughness rather than time is the critical factor in secondary search.”

The first part of A (i.e., “a primary search is always conducted”) is clearly incorrect given the explanation provided for question 29, which indicates that a primary search is not conducted in buildings that are engulfed in flames. There is not enough information in the passage to indicate whether or not the second part of alternative A (i.e., “A secondary search is not always conducted”) is true.

Although the second part of B (i.e., “a primary search is not always conducted”), may be true, again, there is not enough information in the passage to allow us to evaluate the first part of B (i.e., “a secondary search is always conducted”).

Finally, C incorrectly reverses the purposes of the two types of search.

CONCLUSION

This Guide represents an attempt to familiarize you with all aspects of the written test, including the items or exercises, logistics and evaluation procedures; as well as to provide some suggestions for preparation. The suggestions provided here are not exhaustive—we encourage you to engage in whatever additional preparation strategies you believe will enhance your chances of performing effectively on the written test and on the job.