# ALABAMA DEPARTMENT OF TRANSPORTATION TRANSPORTATION MAINTENANCE TECHNICIAN III (90246)

# **HOW TO PREPARE BOOKLET**

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# INSTRUCTIONS AND NOTES ON "HOW TO PREPARE" AND TAKE THE EXAMINATION FOR ALABAMA DEPARTMENT OF TRANSPORTATION TRANSPORTATION MAINTENANCE TECHNICIAN III (TMT III)

#### Introduction

The purpose of these Instructions and Notes is to help you prepare for the EXAMINATION for Transportation Maintenance Technician III (TMT III) with the Alabama Department of Transportation. This booklet contains information about the examination including:

- Suggestions on how to prepare for the examination;
- A description of the nine sections that make up the examination;
- Information on how to answer questions when taking the examination;
- A description of how the examination will be given;
- Some specific guidelines that you must follow during the examination; and
- Information on what you need to bring to the examination.

The Transportation Maintenance Technician III examination is the exam that you need to take in order to be eligible to be hired as a TMT III with the Alabama Department of Transportation.

Again, we repeat the purpose of these instructions and notes: This information is designed to help you prepare to take the examination to become a TMT III with the Alabama Department of Transportation. It is important that you sit down in a quiet place and review the material in this booklet. You should also set aside time to do the things that are suggested in this booklet to prepare for the examination. Please remember that the material in this booklet is designed to help you prepare for the exam. It is not the information that is on the examination. You will not need the material in this booklet at the time you actually take the exam. Therefore, you will not be allowed to carry this booklet into the exam. Later in this booklet, we will instruct you on what you are allowed to bring to the exam session and what you must bring to the exam.

### **Important TMT III Knowledges and Abilities**

An analysis of the TMT III job in the Alabama Department of Transportation showed that a number of knowledges and abilities were important and needed upon entry into the TMT III job. The knowledges and abilities shown below may be measured in the TMT III exam.

- Knowledge of where and how equipment can be safely operated in certain areas such as where
  gas lines, utilities, or people are located and how the equipment can adversely affect the area if
  not operated properly and in a safe manner.
- Knowledge of the different types of equipment used for highway maintenance activities as
  needed to know how to properly operate the equipment, ensure equipment is operated in a safe
  manner, and to ensure that the most efficient equipment is used to perform and complete the job.
- Knowledge of the capabilities and the limitations of highway maintenance equipment as needed
  to ensure equipment is operated safely and that the correct, most efficient equipment is used
  when performing highway maintenance activities.
- Ability to determine the most appropriate type of equipment to be used for maintenance work as needed to ensure the safety of workers and equipment operators in the work area and prevent equipment from being used improperly.
- Ability to perform safety inspections on equipment such as checking fluid levels, lights, brakes, and wipers for proper working conditions as needed to identify maintenance needs.
- Ability to inspect equipment for maintenance needs such as worn belts, cracked hoses, and ungreased joints as needed to prevent major equipment breakdowns and keep in proper working condition.
- Ability to use radios as needed to communicate traffic flagging information, ensure traffic flow through work zones, and the safety of workers and motorists.
- Ability to operate dump trucks having a gross vehicle weight limit of less than 26,000 pounds as needed to haul equipment and materials to and from job sites.
- Ability to operate water trucks carrying less than 1,000 gallons of water as needed to perform road maintenance work such as milling/paving, wet down roadways, mix concrete on job sites, fill barricades, herbicide operations, and cut loops.
- Ability to operate backhoes as needed to dig out ditches, drainage areas, or clean ditches.
- Ability to operate tractors as needed to perform maintenance activities such as mowing grass and or clearing debris off right-of-ways.
- Ability to operate front end loaders as needed to perform roadway maintenance such as loading fill materials, digging ditches, and repairing drainage areas.
- Ability to operate bulldozers as needed to repair roadway shoulders and drainage areas and/or build up areas with fill materials.
- Ability to operate trackhoes as needed to perform road maintenance work such as to dig ditches or drainage areas and/or dig out areas for installing pipe.

- Ability to operate gradalls as needed to dig ditches, grade/maintain ditches, lay pipes, and/or repair field areas.
- Ability to operate excavators such as gradalls, trackhoes, and badgers as needed to perform road
  maintenance work such as removing dirt, digging ditches, filling in washed out road or damaged
  roadways, installing driveway pipe, and setting concrete barriers.
- Ability to operate lowboy transporters as needed to haul maintenance equipment to and from job sites.
- Ability to operate tandem trucks and trailers having a gross vehicle weight limit of more than 26,000 pounds as needed to haul equipment to and from job sites.
- Ability to operate dump trucks having a gross vehicle weight limit of more than 26,000 pounds as needed to haul equipment and materials to and from job sites.
- Ability to operate water trucks carrying over 1,000 gallons of water as needed to perform road maintenance work such as milling/paving, wet down roadways, mix concrete on job sites, fill barricades, herbicide operations, and cut loops.
- Knowledge of concrete properties to include seasonal effects on mixtures, wetness, strength, and
  the amount and size of rock, proper consistencies for the application, and setting up time as
  needed to ensure that the correct mixtures are used for applications and concrete is mixed and
  poured correctly.
- Knowledge of the different types and classes of asphalt such as 411, 311, 414, gravel mixes, sand mixes, and/or popcorn mixes as needed to determine which asphalt mixture is the most appropriate for the applications such as repairing damaged strips or patching potholes.
- Knowledge of the dry and liquid measurements of materials such as concrete or asphalt as needed to convert the mixture's units onto the work order/work report for documenting the use of materials.
- Knowledge of maintenance materials used for repairing roadways such as pipe, riprap, rock, sod, and fill material as needed to determine the most appropriate materials for maintaining or repairing roadways.
- Knowledge of the types of concrete such as polymers, type III, and road patch as needed to mix the concrete materials properly in order to get the desired mixture for an application.
- Knowledge of roadway maintenance procedures such as patching potholes, strip patching, edging, repairing shoulders, grinding high spots on pavement, repairing drainage areas and pipes, and/or sweeping roadways.
- Knowledge of right-of-way lines and easement locations as needed to ensure maintenance work is performed in the correct area and avoid damaging private property.
- Knowledge of proper flagging procedures as needed to properly guide the flow of traffic, complete work safely, and to minimize hazards for ones' self and others.
- Knowledge of traffic control equipment such as cones, warning boards, and portable and
  permanent signs as needed to know what types of equipment are available and required to set up
  work zones, to ensure the smooth flow of traffic through work zones, and to ensure the safety of
  both workers and motorists.

- Knowledge of the different types of traffic control equipment needed for a job based on the type of work area (i.e., bridge, right-of-way, roadway), the type of job to be completed such as pothole repair, strip patching, or clearing debris, and the type of road being worked on (i.e., interstates, state routes or rural roads.)
- Knowledge of traffic control setups as found in the MUTCD manual to include the placement of
  workers, signs, cones, and/or boards for various situations as needed to determine the best route
  for traffic going through work zones and to maintain the safety of workers and motorists.
- Knowledge of the locations and the distances required in the placement of warning signs as needed to ensure a smooth flow of traffic through work zones and the safety of workers and motorists.
- Knowledge of the distance between centerline stripes as needed to understand a 20' stripe and a 20' space as needed to measure the distances of roadway in feet, understand how to measure the distances between signs in a traffic control set up, and to determine the length of the taper.
- Knowledge of the job capabilities and strengths/weaknesses of employees as needed to meet roadway maintenance schedules and assign tasks to appropriate employees.
- Ability to complete work orders, work reports, and leave reports to include items such as
  overtime hours, equipment numbers, fuel used, mileage, and daily activities as needed to
  document crew activities.
- Ability to follow supervisory instructions in both verbal and written form as needed to comply
  with instructions, disseminate instructions to crew members and co-workers, perform the duties
  assigned, and complete the job in a timely manner.
- Ability to pay attention to details such as instructing crew members on how to look for work errors, identifying minor and major maintenance problems, and inspecting equipment as needed to consistently perform quality maintenance work.
- Ability to identify priorities based on time factors and the importance of maintenance work as needed to determine the order in which maintenance work should be performed.
- Ability to be flexible with changing highway maintenance priorities based on the supervisor's instructions.
- Ability to read and understand the Manual on Uniform Traffic Control Devices (MUTCD) as needed to identify the proper maintenance and traffic control equipment, the correct procedures to follow, and the traffic control setup required for the situation as needed to safely direct the flow of traffic in the field.
- Ability to read and comprehend the ALDOT Maintenance manual as needed to understand and follow maintenance procedures, instructions and procedures for equipment operations, and instructions/procedures for traffic control setups.
- Ability to read and comprehend information such as work orders, work reports, leave reports, and written instructions from the crew leader and/or supervisors, bulletin board information, job rotation letters, personnel information, and/or written complaints from the general public.
- Ability to perform basic math calculations such as adding, subtracting, multiplying, and dividing as needed to calculate areas, volumes, quantities, the amount of materials needed, the amount of materials used, fuel used, mileage, daily activities, complete work orders, work reports, identify errors, total the inventory of materials, set up traffic control, and calculate the length of the taper.

- Ability to calculate distances such as length of striping, distances between striping, arrow
  distances from roadsides and turns, distances between traffic control markers, pass lane striping
  positions, and distances between mile post markers to ensure the safety of motorists, and the
  length of the taper.
- Ability to calculate the amount of acreage in an area as needed to determine the amount of area that was mowed, how much material was used, or how much herbicide chemical will be needed for spraying.
- Ability to calculate areas (square feet) as needed to determine the amount of material such as asphalt or concrete that is required for a maintenance job.
- Ability to calculate volumes (cubic feet) as needed to determine how much material is needed for concrete work, herbicide spraying, or asphalt repairs.
- Ability to estimate the amount of materials needed for a job such as concrete, rock, or asphalt as needed to perform maintenance such as patching potholes and repairing damaged roadway strips, and to ensure enough materials are acquired for a job.

### **Description of the Sections Comprising the Examination**

The examination is divided into nine sections. All nine sections of the examination will be given on the same day.

If you require reasonable accommodation to participate in this examination, you must notify the State Personnel Department in writing of this need no later than two weeks prior to your scheduled date to take the examination.

In the rest of this "How to Prepare" booklet, we will provide general information about the examination, information about preparing to take the examination, what the testing situation will be like, and a description of the nine different sections of the TMT III examination.

#### **General Information about the Examination**

The examination will last approximately three hours and thirty minutes which includes registration, instructions, and actual testing time.

When you read the word "exam" in the rest of these Instructions and Notes, it is a short way of referring to the entire examination.

There are several different types of questions in the exam. The types of questions and how you are expected to respond to them will be explained in the instructions regarding each section of the exam on Pages 11 - 22 of this booklet.

You will be given specific instructions on how to complete each section of the exam during the administration of the TMT III exam. Each section or question of the exam will also indicate how you should respond to each item. It is a good idea to bring a watch so that you can keep up with how much time you have remaining once the exam has started.

### **Preparing for the Examination**

Here are some suggestions for what to do before the exam and for getting to the exam location on the correct day, on time, and with the proper things that you will need to take the exam.

- Be well rested. Get a good night's sleep for several nights in a row before the exam.
- Allow plenty of time to get to the exam. If you are rushed and late, you might be upset when you get there. Plan to get there a few minutes before the scheduled time for check-in. If you are late, you will **not** be admitted to the exam site.
- Come to the exam dressed comfortably. You will be at the test site for about *3 hours and 30 minutes* which includes the time to register and take the exam.
- Do not bring this booklet to the exam location. You will not be permitted to bring it to the test site.
- Do not bring any of your study materials to the exam. This includes notes and any resources that you may have used to prepare for the exam.
- You should read and study this booklet.
- You should bring the NOTIFICATION CARD that you will receive from the State Personnel Department to the exam location. The NOTIFICATION CARD lists the **name** of the exam, the **place** you should go in order to take the exam, and the **time** and **date** of the exam. You **must** also bring a PICTURE IDENTIFICATION to the exam location. This may be a valid driver's license, a military identification card, or a passport. You only need to have one form of PICTURE IDENTIFICATION. During registration, you will be asked to verify the last four digits of your social security number.
- We recommend that you also bring a watch to the exam so that you will know how much time you have remaining to work on the exam once it has started.
- You should obtain directions to the exam location prior to the day of the exam.
- If you fail to appear for this exam, you must submit a new application in order to re-apply.

### **During the Examination**

#### **General Guidelines**

Some people are nervous when they take exams. Up to a point, there is nothing wrong with that. Whenever you are going to do something important, it is generally good to feel a bit "keyed up."

However, it is not good to be so nervous that all you can think about is how nervous you are. You need to keep your mind on the content of the exam questions. To improve your ability to do that, you will find the ideas in this booklet on how to study and prepare for the exam useful. **The more prepared you are, the more comfortable and less nervous you will feel during the exam**.

In an exam like this one, some questions are easy and some are hard. Probably no one will make a perfect score. If it is hard for you to figure out an answer, it is probably hard for other people also. Keep your mind on the test and try to answer every question. There is no penalty for guessing on this exam.

Don't pay attention to other people who are taking the exam. You **do not** want to waste your time. You **do** want to concentrate on your exam.

There are two things you can do that will make you feel more comfortable taking the exam.

- Follow the guidelines presented in this booklet on how to prepare for the exam.
- Become familiar with the kinds of questions used in the sections that make up the exam.

Most of the remainder of this booklet will try to help you with these two things.

### **Specific Guidelines**

We are now going to review some specific guidelines that you will be expected to follow when you come to take the nine sections that make up the TMT III examination.

- You should use the restroom before the exam begins. You will not be allowed to leave your seat during the exam except for an emergency (restroom or otherwise). IMPORTANT: The exam will not stop while you are out of the room during an emergency and you will lose some of the time given to answer the questions or may miss some of the instructions.
- There will be exam monitors in the room in which you are being tested. They will be available to assist you if you have any problems.
- Exam monitors will not interpret exam questions for you or provide any information related to the exam questions.
- You are not to open the exam booklet or begin working on any section of the exam until you are instructed to do so.
- You may not smoke or eat in the exam room.
- Please do not talk during the exam. Keep your eyes on your own exam papers and materials. Candidates making any disturbances or caught cheating may be disqualified from the exam.

- The total time for actually taking the entire exam is 3 hours and 15 minutes. This does not include the time for registration, receiving instructions or distributing and picking up exam materials.
- Section 2 through 9 of the examination consists of questions or incomplete statements followed by four possible answers. Although more than one of the possible answers may be partly correct, there is only one choice which is the best answer.
- You will be provided with #2 pencils by the exam administrator. You will be asked to write your responses on a Scantron Answer Sheet during the exam. You are allowed to write, mark, or figure in your test booklet, however, only the answers you mark on your Scantron Answer Sheet will be scored. Answer each question by completely filling (darkening) in the lettered circle for the choice you consider correct.
- When placing your answer on the answer sheet, be sure to blacken the complete circle with your number 2 pencil. Make a solid black mark covering the complete circle by going over your mark two or three times and pressing firmly on the pencil.
- Erase completely any answers you wish to change. Do on cross them out. Do not fold or crease the answer sheet.
- All materials needed for the exam will be provided. Do not bring any study or reference materials with you to the exam site.
- You should always check to make sure that you are writing your answers in the correct location on the answer sheet; therefore, make sure that the number you are marking on the answer sheet is the same as the number of the question you are responding to in the test booklet.

Prior to beginning the exam, you will be required to read and sign an exam Security Statement. This agreement states that: You are not allowed to possess, use or refer to any personal notes or study materials during this exam. The only materials allowed in the testing room are those provided by the test monitors during the exam. This Security Statement provides examples of cheating. It states that you are not allowed to discuss the content of the Transportation Maintenance Technician III examination with other candidates at any time, now or in the future. It states what the consequences may be if you do not comply with these conditions. Your signature certifies that you understand these conditions and you will comply with the conditions as listed on the Security Statement.

Before you begin working on the exam, the test administrator will read aloud the instructions for completing the exam. These instructions will tell you how to complete each section of the exam. The test administrator will also give you an opportunity to ask questions before the exam begins. You will have 15 minutes to complete Section 1 in the exam. The test administrator will tell you when your time for working on Section 1 is over. After completing Section 1, you will have 3 hours to complete the eight remaining sections of the exam. The test administrator will tell you when you may begin. When the test administrator tells you that your time for completing the TMT III exam is up, you must stop working immediately. The test monitors will come to your table, collect your materials, and dismiss you.

The nine sections of the TMT III exam are described in detail in the following pages of this booklet.

# TMT III Examination Section One

## **Description of Section One**

Section One of the TMT III examination is called the "Equipment Operation Experience" section.

In this section, you will answer ten questions based on your past work experience with various equipment. This is not a test of your belief that you have the ability to perform these tasks. It is instead designed to determine which of these tasks you have <u>actually performed as a part of your routine job</u> duties.

To complete this section, you will indicate if you have, or have not, operated each piece of equipment listed. If you have correctly operated the piece of equipment listed, you will place a " $\sqrt{}$ " in the appropriate box. If you have <u>not</u> operated the equipment, you will leave the box <u>blank</u>. If you indicate you have correctly operated that piece of equipment, then you must indicate how long you actually operated that piece of equipment and provide the name of your most recent supervisor and the name of your most recent employer where you operated the equipment. You must also indicate the approximate date (year(s)) in which you operated that piece of equipment.

It would be a good idea to begin to research the names of past employers, the names of your supervisors at jobs where you gained equipment operation experience, and the years in which you operated the equipment so you will know this information for the test. Note: you will not be allowed to bring this or any other information into the exam room.

Before you begin, you will be asked to read, sign, and date the following statement:

Your signature certifies that all information you will provide in response to this section will be complete and accurate to the best of your knowledge and belief. The State Personnel Director may disqualify you from further consideration, remove your name from the register, or refuse to certify your name from the register if you have not provided complete and accurate information. Further, you can be dismissed from State service for making false statements or certifications with respect to a test.

You will be given a total of 15 minutes to complete the ten questions in this section.

An example of a correctly completed Equipment Operation Experience Form is shown on the next page. You will be asked to provide this type of information for ten different pieces of equipment.

# EXAMPLE EQUIPMENT OPERATION EXPERIENCE FORM

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5	COLUMN 6
EQUIPMENT	Place a check next to each piece of equipment that you have operated as a part of your routine job duties.	For each piece of equipment that you checked in Column 2, write how long you actually operated that piece of equipment.	For each piece of equipment that you checked in Column 2, write the name of the most recent Organization or Company you worked for when you operated the piece of equipment.	For each piece of equipment that you checked in Column 2, write the name of the most recent Supervisor who can verify that you operated the piece of equipment.	For each piece of equipment that you checked in Column 2, write the approximate dates in years (2008 – 2012) that you operated the piece of equipment.
EXAMPLE Motor Grader	<b>√</b>	4 years	ALDOT	Jack Johnson	2008 - 2012

# TMT III Examination Section Two

## **Description of Section Two**

Section Two of the TMT III examination is called the "Equipment Inspection" section.

In this section, you will view pictures of four types of equipment commonly used in the TMT III job. For each piece of equipment, you must answer three questions:

- 1. What is this piece of equipment called?
- 2. This piece of equipment is most commonly used to:
- 3. Prior to operating this piece of equipment, you should include all of the following as a part of your inspection except?

Possible answers to these questions will be in the multiple-choice format. To answer the first question, you will be shown an actual photograph of each piece of equipment. Below the picture will be names of four different types of equipment. You will be required to answer these questions on a Scantron Answer Sheet by darkening in the circle on the answer sheet to indicate your answer to the question.

To answer Question 2, you will be shown different purposes each piece of equipment may be used for. You will be required to darken the circle on the Scantron Answer Sheet for the letter representing the correct response to the question.

To answer the third question, you will be shown a list of parts and/or features. You will be required to darken the circle on the Scantron Answer Sheet for the letter representing the correct response to the question.

An example is shown below:



- 1. The equipment shown above is called:
  - A. a fork lift.
  - B. a steel wheel roller.
  - C. a backhoe.
  - D. a skid loader.

The correct answer is "B", therefore, the letter "B" should be darkened on your Scantron Answer Sheet.

- 2. The equipment shown above is most commonly used to:
  - (A) compact asphalt.
  - (B) compact dirt.
  - (C) spread tar.
  - (D) smooth cement.

The correct answer is "A", therefore, the letter "A" should be darkened on your Scantron Answer Sheet.

As a TMT III you should have the ability to inspect equipment for safety hazards and maintenance needs in order to keep the equipment in proper working condition and to ensure the equipment is operated in a safe manner. Prior to operating the equipment shown on the previous page, you should include all of the following as a part of your inspection **except** the:

- (A) vibrator.
- (B) roller.
- (C) air compressor.
- (D) drum.

The correct answer is "C", therefore, the letter "C" should be darkened on your Scantron Answer Sheet.

# TMT III Examination Section Three

# **Description of Section Three**

Section Three of the TMT III examination is called the "Equipment Operations" section.

In this section, you will be asked to determine the most appropriate type of equipment to use for different types of road maintenance work.

There are approximately 10 multiple choice questions in this section. For each question, you will be given a road maintenance situation and a list of equipment from which to choose. You must darken the letter on your Scantron Answer Sheet that represents the correct answer.

An example is shown below:

In order to perform road maintenance work such as spraying herbicide on the right-of-way, which of the following equipment would be the most appropriate to use?

- (A) Steel Wheel Roller
- (B) Dump truck
- (C) Herbicide truck
- (D) Thermoplastic machine

The correct answer is "C", therefore, the letter "C" should be darkened on your Scantron Answer Sheet.

# TMT III Examination Section Four

# **Description of Section Four**

Section Four of the TMT III examination is called the "Maintenance Materials" section.

In this section, you will be required to know the different maintenance materials used in highway maintenance work.

There are approximately 10 multiple choice questions in this section. For each question, you will be asked specific questions regarding highway maintenance materials. You must darken the letter on your Scantron Answer Sheet that represents the correct answer.

# Example:

Which of the following materials would be the most appropriate to use in order to ensure safe travel on icy roads or bridges?

- (A) Gravel
- (B) Oil
- (C) Water
- (D) Sand

The correct answer is "D", therefore, the letter "D" should be darkened on your Scantron Answer Sheet.

# TMT III Examination Section Five

## **Description of Section Five**

Section Five of the TMT III examination is called the "Maintenance Procedures" section.

In this section, you will be required to know the different maintenance procedures used in highway maintenance work.

There are approximately 8 multiple choice questions in this section. For each question, you will be asked specific questions regarding highway maintenance procedures. You must darken the circle on your Scantron Answer Sheet that represents the correct answer.

# Example:

What is one procedure that a TMT III should follow to paint stripes on the roadway in order to provide roadway markings that give motorists directional information and safety reference markings?

- (A) Remove old thermoplastic and raised pavement markers from the road using a paint scraper.
- (B) Remove old thermoplastic and raised pavement markers from the road using a grinder.
- (C) Wash the roadway prior to the placement of stencils.
- (D) Apply clear coat after painting to protect the paint from wear and tear.

The correct answer is "B", therefore, the letter "B" should be darkened on your Scantron Answer Sheet.

# TMT III Examination Section Six

Section Six of the TMT III examination is called the "Crew Leading" section.

In this section, you will need to know about crew leading duties since many TMT III's serve as crew leaders. There are three sets of questions for this section of the examination.

For the first set of questions, you will be given information about some highway maintenance projects that need to be completed. You will also be given information about several crew members such as their strengths, weaknesses, work experience, and qualifications. For this set of multiple choice questions, you must determine which crew members are the most qualified to work on each project in order to ensure each project is completed safely and in a timely manner. You should base your decisions on the strengths, weaknesses, work experience, and qualifications of each crew member.

For the second set of questions in this section, you will be required to review a set of responsibilities that have been assigned to you by your supervisor in order to answer several multiple choice questions. For this set of questions, you will be required to identify priorities and be flexible with changing priorites. A description of a situation will be provided and you must determine which assignment you will do next.

In the third set of questions in this section, you will be given a scenario of the work performed by a crew on a particular day. In order to respond to the multiple choice questions, you will be required to calculate information that may be needed to complete work orders, work reports, and/or leave reports.

For each question in Section 6, you must darken the circle on your Scantron Answer Sheet that represents the correct answer.

An example is shown below:

#### Example:

Logan Clarke worked from 7:00 a.m. until 4:00 p.m. He took a 30 minute lunch break. How many hours did he work?

- (A) 8 hours 00 minutes
- (B) 8 hours 30 minutes
- (C) 9 hours 00 minutes
- (D) 9 hours 30 minutes

The correct answer is "B", therefore, the letter "B" should be darkened on your Scantron Answer Sheet.

# TMT III Examination Section Seven

# **Description of Section Seven**

Section Seven of the TMT III examination is called the "Math Calculations" section.

In this section, you will need to know how to perform math calculations in order to calculate distances, the amount of acreage in an area, square footage, volume, and to estimate the amount of material needed for a job.

There are approximately 10 multiple choice questions in this section. For each question, you will be asked specific questions regarding highway maintenance procedures. You will be provided with a basic functioning calculator during the exam. You must darken the circle of the letter on your Scantron Answer Sheet that represents the correct answer.

## Example:

A ditch is 4' wide and 200' long. What is the area of the ditch?

Formula: Area equals length x width

- (A) 50 square feet
- (B) 204 square feet
- (C) 196 square feet
- (D) 800 square feet

#### $4' \times 200' = 800$ square feet

The correct answer is "D". The letter "D" should be darkened on your Scantron Answer Sheet.

### Example:

A field is 605' long and 454' wide. How many acres of land is the field?

Formula: Area equals length x width

To convert feet to acres, you must know that 1 Acre = 43,560 square feet

- (A) .15 acres
- (B) 6.00 acres
- (C) 6.30 acres
- (D) 274,670.00 acres

605 feet x 454 feet = 274,670 square feet 274,670 divided by 43,560 = 6.30 acres

The correct answer is "C". The letter "C" should be darkened on your Scantron Answer Sheet.

**Note:** Formulas and conversion factors such as the one shown in the example above, will be provided on the exam. However, you should practice solving these types of problems.

# TMT III Examination Section Eight

# **Description of Section Eight**

Section Eight of the TMT III examination is called the "Reading Comprehension" section.

In this section, there are approximately 10 multiple choice questions. You will be required to read information taken from the ALDOT Highway Maintenance Manual. You should answer the questions based solely on the information that you read and not on any prior information you may have heard or learned.

For each question, you must darken the circle on your Scantron Answer Sheet that represents the correct answer.

#### An example is shown below:

Minor maintenance work due to emergencies and disasters should be performed as soon as possible to protect the motorist and elements of the roadway and structures on State Highway Systems. Major repairs and/or replacement of damaged roadway and bridge elements are to be scheduled through the division and the Bureau of Maintenance as special maintenance projects.

A high priority should be put on bridge structures which usually freeze and become slippery first. Some sections of roadway surfaces such as hills and curves may freeze and become slippery. Sand or fine abrasive material may be effective in these type conditions. During long periods of sleet and snow, repeated use of abrasive material may cause problems during thawing by holding water on a roadway which freezes again at night.

Chemicals may be effective in controlling ice forming on the surface of the road. Chemicals, if applied at the proper time, can assist in the removal of snow and ice accumulation on the roadway surface. Bridge and culvert decks should not be treated with chemicals which are used to remove snow and ice accumulations. These chemicals usually initiate or greatly accelerate the corrosion of reinforcing steel and corrosion in the steel members of bridges and culverts. Chemicals may be used on structures to assist in the removal of snow and ice accumulations only after approval is given by both the Division Engineer and the State Maintenance Engineer.

Two examples of questions for this section of the examination are found on the next page.

Example	e:
Chemica	als used to remove snow and ice should not be used on and
(A)	bridge and culvert decks
(B)	roadways and bridges
(C)	culvert decks and roadways
(D)	bridges and highways
The cor Sheet.	rect answer is "A", therefore, the letter "A" should be darkened on your Scantron Answer
Example	e:
A high p	priority should be placed on since they usually freeze and become slippery first.
(A)	roadways surfaces
(B)	bridge structures
(C)	right-of-ways
(D)	driveways

The correct answer is "B", therefore, the letter "B" should be darkened on your Scantron Answer Sheet.

# TMT III Examination Section Nine

# **Description of Section Nine**

Section Nine of the TMT III examination is called the "Traffic Control" section.

Section Nine is divided into two parts. In Part 1, there are several multiple choice questions related to flagging procedures and traffic control.

In Part 2, you will be required to read and review information regarding how to set up the proper traffic control for a roadway repair situation. You will read and review information taken from the Manual on Uniform Traffic Control Devices (MUTCD) along with other information provided in Section Nine of the exam in order to identify the proper traffic control on a diagram showing a specific roadway repair situation. You will be required to know about traffic control setups to include identifying different types of symbols and/or signs, the placement of signs, cones, and other traffic control devices, and determine the distances required between different traffic control devices. All of the questions in this section of the examination will be multiple choice questions.

For each question in Section 9, you must darken the circle on your Scantron Answer Sheet that represents the correct answer.

### **Additional Tips for Preparing for the TMT III Examination**

You should study whatever material you believe will assist you in gaining or improving your level of the knowledges and abilities listed on page 3 - 6 of this guide. You may also find it beneficial to review a MUTCD manual, especially the sections regarding traffic control. However, your exam booklet will contain all of the MUTCD based diagrams and other information you will need to answer the test questions.

Some general ways to study for the exam are given below.

- Set aside certain times when you will be able to review this booklet so you will know what to expect at the exam.
- When you do study, keep your mind on what you are doing. Do not try to read where it is noisy or when you are doing something else.
- Review this booklet several times. Do not put off your review until just before the day of the test.
- Research your past work duties and experences with highway maintenance equipment. The name of your employer, the years you operated the equipment, and the name of your supervisor are very important.

We have presented these study guidelines to help you prepare to take the TMT III examination. Preparing for the exam should help you to do your best on the exam.

### What to Bring to the TMT III Examination

Bring your NOTIFICATION CARD and PICTURE IDENTIFICATION when you come to take the examination.

Bring a wristwatch to help keep track of time. Please turn off any alarm before you get to the testing facility.

Everything you need to take the exam, such as paper, pencils, and calculators will be provided for you. You will not need to bring any of these items with you on the day of the exam.

Do not bring this booklet to the exam. Also, do not bring any personal notes, reference or study material that you prepared or used before the exam.

Do not bring cell phones, pagers, beepers, personal stereos, or any other noise producing devices with you to the exam. You will not be allowed to bring them with you into the exam facility.

Do not bring children or any other visitors to the exam. They will not be admitted to the test site.

THIS CONCLUDES THE INSTRUCTIONS AND NOTES ON "HOW TO PREPARE" AND TAKE THE TRANSPORTATION MAINTENANCE TECHNICIAN III EXAMINATION.