After studying this chapter, you will be able to:

- List the most common automotive careers.
- Describe the type of skills needed to be an auto technician.
- Explain the tasks completed by each type of auto technician.
- Summarize the ASE certification program.

Over the last 25 years, the number of vehicles in the United States has increased by 40%. Today, there are well over one-hundred million vehicles on the road. In a single year, Americans spend approximately four-hundred billion dollars to own and operate their vehicles. Amazingly, there are about fourteen million people employed in the automotive field.

Economists predict a continued demand for skilled automotive technicians and other automotive-related professions for many years. Our country is, and will continue to be, a "nation on wheels."

The Automotive Technician

An automotive technician makes a living diagnosing, servicing, and repairing cars, vans, and light trucks. The technician must be highly skilled and well trained. He or she must be a "jack of all trades," being able to perform a wide variety of tasks. For example, an experienced master automobile technician is usually capable of performing operations common to the following occupations:

- Machinist (precision measurements, brake part machining).
- Plumber (working with fuel lines and power steering lines).
- Welder (gas and arc welding on exhaust systems, parts repair).
- Electrician (charging, starting, lighting system service).
- Electronic technician (servicing a vehicle's electronic parts).
- Air conditioning technician (repairing and recharging auto air conditioning).
- TV-radio technician (installing and repairing vehicle sound systems, cellular phones, and radios).
- Computer technician (servicing a vehicle's on-board computers).
- Bookkeeper (business-type tasks, such as filling out repair orders, calculating hours on a job, ordering parts, totaling work order costs, etc.).

As this list demonstrates, an automobile technician's job can be very challenging. The technician is called on to perform a variety of repair tasks, which prevents boredom on the job. If you like to use your mind and your hands, automotive service can be a rewarding and interesting profession.

General Job Classifications

A wide variety of jobs are available in the automotive field. Many of these jobs involve troubleshooting, service, and repair.

Service Station Attendant

A job as a service station attendant requires little mechanical experience, yet provides an excellent learning experience. A "gas station" with a repair area provides better training than a station without a repair area. You could learn to make simple repairs and work your way into a position as a "light mechanic." As a service station attendant, you might do oil changes, grease jobs, and similar service tasks.

Apprentice

Another way to get started in automotive service is to become an apprentice. The apprentice, or helper mechanic, works under the direction of an experienced technician.
This is a good way to get paid for an education. As an apprentice, you would learn about automotive technology by running for parts, cleaning parts, maintaining tools, and helping with repairs. See Figure 2-1.

Specialized Technician

A specialized technician is an expert in one area of automotive repair, such as engines, brakes, electrical, or other areas. Because of the increasingly complex nature of today's vehicles, the trend is toward specialization. It is much easier to learn to repair one system than all systems. After specializing in one area, you can expand your abilities to include other areas of repair.

Common areas of specialization include engines, transmissions, steering and suspension, brakes, electrical, heating and cooling, driveability and performance, and lubrication.

An engine technician troubleshoots, services, and repairs automobile engines. Refer to Figure 2-2. This requires a knowledge of all types of engines: gasoline, diesel, 4-cylinder, 6-cylinder, 10-cylinder, etc. The engine technician has one of the most physically demanding automotive jobs. It requires a fairly strong individual who can lift heavy parts and easily torque large fasteners.

A transmission technician works on automatic and manual transmissions, transaxles, clutches, and, sometimes, rear axle assemblies. Because transmissions are so complex, the transmission technician must receive very specialized training and must frequently retrain. Some large service facilities have a rear axle specialist, who works on nothing but differentials, axle shafts, and drive shafts.

A steering and suspension technician is responsible for checking, replacing, and adjusting steering and suspension components. This technician must use specialized equipment, such as the wheel alignment rack, to line up the wheels. A steering and suspension technician may also take care of tire and wheel problems.

A brake technician specializes in brake system service and repair, Figure 2-3. This individual must be capable of rapidly diagnosing problems and making adjustments or repairs. A brake technician's job is one of the easiest to master. Jobs are available in both small and large shops, service stations, and tire outlets.

The electrical system technician must be able to test and repair lighting systems, charging systems, computer control systems, starting systems, and other electrical systems. Compared to other specialties, this area of repair might be desirable because it requires less physical strength than other areas. See Figure 2-4.

A heating and air conditioning technician must troubleshoot, service, and repair heaters, vents, and air conditioning systems. In some instances, this technician will install new air conditioning systems in vehicles. This requires considerable skill.
The driveability and performance technician must test and service engine fuel, ignition, computer, and emission systems. As pictured in Figure 2-5, this involves the use of special test equipment to keep engines in top running condition. The driveability and performance expert must change spark plugs, as well as adjust and repair carburetors, fuel injection systems, and ignition system components.

The lubrication specialist changes engine oil, filters, and transmission fluid. He or she checks various fluid levels and performs "grease jobs" (lubricates pivot points on suspension and steering systems).

Master Technician

A master technician, or general technician, is an experienced professional who has mastered all the specialized areas of automotive technology and is capable of working on almost any part of a vehicle. This person can service and repair engines, brakes, transmissions, axles, heaters, air conditioners, and electrical systems. A master technician generally has enough experience to advance to a position as a shop supervisor, a service manager, or an instructor.

Shop Supervisor

The shop supervisor is in charge of all the other technicians in the service facility. The supervisor must be able to help others troubleshoot problems in all automotive areas. The shop supervisor must also communicate with the service manager, parts manager, and technicians.

Service Manager

The service manager is responsible for the complete service and repair operation of a large repair facility. This person must use a wide range of abilities to coordinate the efforts of the shop supervisor, parts specialist, service writer, service dispatcher, and other shop personnel. The service manager must also handle customer complaints, answer questions, and ensure that the technicians are providing quality service for their customers.
Other Automotive Careers

There are numerous other automotive careers that do not require extensive mechanical ability. They do, however, require a sound knowledge of automotive technology. A few of these careers are discussed below.

An auto parts specialist must have a general knowledge of the components and systems of a vehicle. This person must be able to use customer requests, parts catalogs, price lists, and parts interchange sheets to quickly and accurately find needed parts.

A service writer, or service advisor, prepares work orders for vehicles entering the shop for repair or service. This person greets customers and listens to descriptions of their problems. The service writer must then fill out the repair order, describing what might be wrong.

A service dispatcher must select, organize, and assign technicians to perform each auto repair. The dispatcher must also keep track of all the repairs taking place in the shop.

An auto salesperson informs potential buyers of the features and equipment on a vehicle while trying to make a sale. By understanding how a vehicle works, the salesperson will be better prepared to answer questions. Positions are also available selling automotive-related parts and equipment, Figure 2-6.

An automotive designer has art training and can make sketches or models of new body and part designs. This person is employed by automobile or automotive part manufacturers, Figure 2-7.

An automotive engineer designs new and improved automotive systems and parts. This person must use math, physics, and other advanced technologies to improve automotive designs. An engineer is a highly

Figure 2-6. A convention allows manufacturers of parts, tools, and equipment to display new and established products. People well versed in automotive technology and sales are needed to work at these events.

Figure 2-7. Automotive designers must have extensive engineering knowledge and a strong art background to design buildable yet aesthetically pleasing vehicles. (Mitsubishi)

Figure 2-8. Automotive engineers normally have a bachelor's degree in a related engineering discipline. A working knowledge of automotive technology is a must for the engineer. (MSD Ignitions)

Figure 2-9. An automotive instructor must have a strong background in automotive technology and must also be able to communicate well. (Ford)
A paid, college-trained individual with a working knowledge of the entire automobile, Figure 2-8.

Automotive instructors are experienced technicians capable of sharing their knowledge effectively. In addition to on-the-job experience, most instructors are required to have a college degree, Figure 2-9.

There are dozens of other job titles in the automotive field. Check with your school guidance counselor for more information. The chart in Figure 2-10 shows automotive job opportunities. Trace the flow from manufacturer to service technician.

Figure 2-10. Note the many positions available in the automotive field. (Florida Dept. of Voc. Ed.)
Tech Tip!
Many people start their careers as automotive technicians and then move to other related job areas. Never limit your sights on the future. Always try to improve your skills and potential for a new and better job.

Preparing for a Career in Automotive Technology

A career as an automobile technician can be quite challenging. Late-model cars and light trucks are very complex. They are constantly being updated and redesigned. This makes it difficult to keep up with the latest technology.

Many of the basic skills needed to succeed in automotive technology are learned in the classroom. Automobile technicians must have above-average math and English skills. They must be proficient at working with numbers to calculate part clearances and fill out work orders. They must also have good verbal skills to effectively communicate with customers and other technicians.

Many schools offer cooperative training programs. These programs allow you to earn school credit and a wage by working in a commercial repair shop. The employer gets a tax credit while helping the student technician learn the trade. Ask your guidance counselor or automotive instructor about a possible cooperative training program in your school.

ASE Certification

The National Institute for Automotive Service Excellence, or ASE, is a nonprofit, nonaffiliated (no ties to industry) organization formed to help ensure the highest standards in automotive service.

ASE directs an organized testing and certification program under the guidance of a 40-member board of directors. The members of this board represent all aspects of the automotive industry—educators, shop owners, consumer groups, government agencies, aftermarket parts distributors, auto manufacturers, etc. This broad group of experts guides the ASE certification program and helps ASE stay in touch with the needs of the industry.

ASE certification is a program in which persons take written tests to prove their knowledge of automotive technology. ASE certification tests are voluntary. They do not have to be taken, and they do not license technicians.

Some countries have made technician certification a requirement. In the United States, however, technicians take the tests for personal benefit and to show their employers and customers they are fully qualified to work on a system of a car or an engine.

Over 500,000 technicians have passed ASE certification tests. Thousands of these technicians have been retested and recertified after five years to maintain their credentials.

Test Categories

In automotive technology, there are eight test categories: Engine Repair, Automatic Transmission/Transaxle, Manual Drive Train and Axles, Suspension and Steering, Brakes, Electrical Systems, Heating and Air Conditioning, and Engine Performance.

You can take any one or all of these tests. However, only four tests (200 questions maximum) can be taken at one testing session.

There are also seven medium/heavy truck tests, five collision repair and refinish tests, three engine machinist tests, and one advanced engine performance test. Figure 2-11 provides a breakdown of each automotive test.

Certification Status

ASE-certified automobile technician status is granted for each ASE test passed. ASE-certified master automobile technician status, previously called certified general technician status, is granted when all eight automobile tests have been passed.

Sleeve or shirt patches and certificates are awarded for each test passed. This will let your customers know that you are fully capable of repairing their vehicles. See Figure 2-12.

Tech Tip!
Become a certified automobile technician! If you master the material in this textbook, you should have no trouble passing all the ASE certification tests. As an ASE-certified technician, you will gain added respect from your employer and your customers.

Applying for ASE Tests

Anyone may take the ASE tests; however, a passing grade does not lead to automatic certification. To receive certification, the applicant must also have at least two years of experience as an automobile or truck technician. This experience does not have to be in any specific area of automotive service. In some cases, training programs, apprenticeship programs, or time spent performing similar work can be substituted for all or part of the work experience.

In some cases, formal training can be substituted for all or part of the experience requirement:
• High school training for three full years in automotive technology can be substituted for one year of work experience.
• Post-high school training for two years in a public or private facility can be substituted for one year of work experience.
• Two months of short training courses can be substituted for one month of work experience.

To have schooling substituted for work experience, you must include a copy of your transcript (list of courses taken) or a certificate verifying your training or apprenticeship with your registration form and fee payment. Each should give your length of training and subject area.

To apply to take ASE tests, begin by acquiring a registration booklet. The registration booklet contains the

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**A1 Engine Repair Test**

60 Questions

- General engine diagnosis 17 questions
- Cylinder head and valve train diagnosis/repair 14 questions
- Engine block diagnosis/repair 14 questions
- Lubrication and cooling systems diagnosis/repair 8 questions
- Fuel, electrical, ignition, and exhaust systems inspection/service 7 questions

**A2 Automatic Transmission/Transaxle**

50 Questions

- General transmission/transaxle diagnosis 25 questions
- Transmission/transaxle maintenance and adjustment 4 questions
- In-vehicle transmission/transaxle repair 8 questions
- Off-vehicle transmission/transaxle repair 13 questions

**A3 Manual Drive Train and Axles**

40 Questions

- Clutch diagnosis/repair 6 questions
- Transmission diagnosis/repair 6 questions
- Transaxle diagnosis/repair 8 questions
- Drive shaft/half shaft and universal joint/CV joint diagnosis/repair 6 questions
- Rear axle diagnosis and repair 7 questions
- Four-wheel drive/all-wheel drive component diagnosis/repair 7 questions

**A4 Suspension and Steering**

40 Questions

- Steering systems diagnosis/repair 10 questions
- Suspension systems diagnosis/repair 11 questions
- Related suspension and steering service 2 questions
- Wheel alignment diagnosis/adjustment/repair 12 questions
- Wheel and tire diagnosis/repair 5 questions

**A5 Brakes**

50 Questions

- Hydraulic system diagnosis/repair 14 questions
- Drum brake diagnosis/repair 6 questions
- Disc brake diagnosis/repair 12 questions
- Power assist units diagnosis/repair 4 questions
- Misc. systems diagnosis/repair 7 questions
- Antilock brake systems diagnosis/repair 7 questions

**A6 Electrical/Electronic Systems**

50 Questions

- General electrical/electronic system diagnosis 13 questions
- Battery diagnosis/service 4 questions
- Starting system diagnosis/repair 5 questions
- Charging system diagnosis/repair 5 questions
- Lighting systems diagnosis/repair 6 questions
- Gauges, warning devices, and driver information systems diagnosis/repair 6 questions
- Horn and wiper/washer diagnosis/repair 3 questions
- Accessories diagnosis/repair 8 questions

**A7 Heating and Air Conditioning**

50 Questions

- A/C system service/diagnosis/repair 12 questions
- Refrigeration system component diagnosis/repair 10 questions
- Heating and engine cooling systems diagnosis/repair 5 questions
- Operating systems and related controls diagnosis/repair 17 questions
- Refrigerant recover, recycling, handling, and retrofit 6 questions

**A8 Engine Performance**

60 Questions

- General engine diagnosis 10 questions
- Ignition system diagnosis/repair 10 questions
- Fuel, air induction, and exhaust systems diagnosis/repair 11 questions
- Emission control systems diagnosis/repair 9 questions
- Computerized engine controls diagnosis/repair 16 questions
- Engine electrical systems diagnosis/repair 4 questions

**Note:** Each test may contain additional questions for statistical research. These questions are not identified, but do not affect the scoring of the test.

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Figure 2-11. These are the test categories for ASE automobile certification. If you pass a test in a given area and have two years of applicable work experience, you will be certified as an ASE Automobile Technician. If you pass all eight tests and have the required work experience, you will be certified as an ASE Master Automobile Technician. (ASE)
When submitting the application, you must include a check or money order to cover all necessary fees. A fee is charged to register for the test series, and a separate fee is charged for each test taken. Refer to the latest ASE Information Bulletin for the current fee structure. In some cases, employers pay the registration and test fees. Check with your employer before submitting your application.

After receiving your application and fees, ASE will send you an admission ticket to the test center. You should receive the ticket by mail about two weeks after submitting your application.

Test-Taking Techniques

Follow all instructions given by the test administrators. During the test, read each question carefully before deciding on a proper answer. You must select the most correct response. Sometimes more than one response is correct. However, one answer will always be more correct than the others.

You will not be required to recall exact specifications unless they are general and apply to most makes and models of cars. For example, compression test pressure readings and engine clearances are typically about the same for all gasoline engines. This type of general information might be needed to answer some questions.

After completing all the questions in a particular test, recheck your answers to ensure that you did not make a careless error. In most cases, rechecking your answers more than once is unnecessary and may lead you to change correct answers to incorrect ones. The time allowed for each test is usually about four hours. However, you may leave after completing your last scheduled test and handing in all test material.

A few tips that might help you pass ASE certification tests include:

- Read the statements or questions slowly. You might want to read through them twice to make sure you fully understand the questions.
- Analyze the statement or question. Look for hints that make some of the possible answers wrong.
- Analyze the question as if you were the technician trying to fix the car. Think of all possible situations and use common sense to pick the most correct response.
- When two technicians give statements concerning a problem, try to decide if either is incorrect. If both are valid statements about a situation, choose the answer stating that both technicians are correct. If only one is correct or neither is correct, mark the answer accordingly. This is one of the most difficult types of questions.
• If the question gives only limited information, make sure you do not pick one answer as correct because it describes a more common condition. If the question does not let you conclude that one answer is better than another, both answers are equally correct.

• Your first thought about which answer is correct is usually the correct response. If you think about a question too much, you may read something into the question that is not there. Read the question carefully and make a decision.

• Do not waste time on any one question. Make sure you have enough time to answer all the questions on the test.

• Visualize yourself performing a test or repair when trying to answer a question. This will help you solve the problem more accurately.

**Types of ASE Test Questions**

ASE tests are designed to measure your knowledge of three things:

• The operation of various automotive systems and components.

• The diagnosis and testing of various automotive systems and components.

• The repair of automotive systems and components.

All test questions are multiple choice and contain four possible answers. Sample questions are given below. The answer to each question is explained in detail.

**One-Part Questions**

In a one-part question, you must choose the best answer out of all the possibilities.

1. Which of the following components ignites the fuel in a gasoline engine?
   (A) Injector.
   (B) Valve.
   (C) Spark plug.
   (D) Glow plug.

   The spark plug produces the electric arc to start the fuel burning. Therefore, the correct answer is (C) Spark plug. The injector simply sprays fuel into the engine. The valve allows the air-fuel mixture to flow into the engine. The glow plug is only used in a diesel engine to warm the combustion chamber to aid combustion.

2. Technician A says a locking rear differential assembly can be refilled with regular gear oil. Technician B says the differential assembly allows the vehicle to turn corners without wheel hop. Who is right?
   (A) A only.
   (B) B only.
   (C) Both A & B.
   (D) Neither A nor B.

   In this question, the statement made by Technician A is wrong. A locking rear wheel differential assembly must be refilled with special nonslip oil. Technician B’s statement is correct, since the purpose of the differential assembly is to allow the vehicle to turn corners without wheel hop. Therefore, the correct answer is (B) B only. Note that Technician A and Technician B appear in many ASE test questions. You must carefully evaluate the statements of each technician before deciding which answer is correct.

**Negative Questions**

Some questions are called negative questions. These questions require you to identify the incorrect answer. Negative questions will usually contain the word "except."

1. An engine contains all of the following bearings except:
   (A) connecting rod bearings.
   (B) main crankshaft bearings.
   (C) camshaft bearings.
   (D) reverse idler bearings.

   Since reverse idler bearings are used in transmissions and there is no bearing with that name used in the engine, the correct answer is (D) reverse idler bearings.

   A variation of the negative question contains the word "least."

1. An automatic transmission installed in a late-model vehicle slips during acceleration. Which of these defects is least likely to be the cause?
   (A) Clogged transmission oil filter.
   (B) Defective transmission oil pump.
   (C) Maladjusted throttle linkage.
   (D) Low fluid level.

   In this case, the least likely cause of transmission slippage is a maladjusted throttle linkage, which is much more likely to cause shifting problems than slippage. Therefore, the correct answer is (C) Maladjusted throttle linkage.
Completion Questions

Some test questions are simply sentences that must be completed. One of the four possible answers correctly completes the sentence.

I. A torque wrench is used to measure:
   (A) twisting force on fasteners.
   (B) shear applied to fasteners.
   (C) horsepower applied to fasteners.
   (D) transmission slip yoke angles.

Once again, the question calls for the best answer. The torque wrench is used to measure twisting force, or torque, so (A) twisting force on fasteners is correct.

Test Results

The results of your test will be mailed to your home. Only you will find out how you did on the tests. You can then inform your employer if you like.

Test scores will be sent out a few weeks after you have completed the test. If you pass a test, you can consider taking more tests. If you fail, you will know that more study is needed before retaking the test.

Recertification Tests

Once you are certified in any area, you must take a recertification test every five years to maintain your certification. Recertification test questions concentrate on recent developments. This ensures that certified technicians will keep up with changes in technology.

Applying to take recertification tests is similar to applying for original certification tests. Use the same form and enclose the proper recertification test fees. If you allow your certification to lapse, you must take the regular certification test(s) to regain your certification.

Text Organization and ASE Certification

This textbook will help you prepare for ASE certification. The content, scope, and organization were developed with the ASE certification tests in mind. Each chapter contains a section of ASE-type questions, which will help you pass the ASE certification tests. Additionally, sample ASE tests are presented at the ends of applicable sections.

Entrepreneurship

An entrepreneur is someone who starts a business, such as a muffler shop, tune-up shop, parts house, or similar facility. To be a good entrepreneur, you must be able to organize all aspects of the business: bookkeeping, payroll, facility planning, hiring, etc. After gaining several years of on-the-job experience, you might want to consider starting your own business.

Most successful entrepreneurs have a quality known as leadership. Effective leaders have the courage to set a course of action and get the cooperation of others in meeting goals. Leaders are willing to accept responsibility for their actions. If their decisions show signs of failure, they take action to correct mistakes. If their decisions are good, they are willing to share the "glory." Good leaders readily credit the work of others who have contributed to the success of the business venture.

Workplace Skills

The automotive industry is one of the largest industries in the United States. A wide variety of jobs and career fields are available within the automotive industry. As you study automotive technology, keep other automotive-related professions in mind. You might enjoy sales more than the service field. Nevertheless, your knowledge of automotive technology will make you a better employee in any field in the automotive industry.

Summary

- Economists are predicting a continued demand for automotive technicians for many years.
- An automotive technician makes a living by diagnosing, servicing, and repairing cars and light trucks.
- A job as a service station attendant requires little mechanical experience, yet provides an excellent learning experience.
- One way to get started in automotive service is to become an apprentice or helper mechanic, working under an experienced technician.
- A specialized technician is an expert on one system of a car. This type of specialist may work only on brakes, transmissions, engines, tune-ups, electrical systems, or air conditioning.
- An engine technician must be able to troubleshoot, service, and repair automobile engines.
- A transmission technician usually works on automatic and manual transmissions, transaxles, clutches, and, sometimes, rear axle assemblies.
- A steering and suspension technician is responsible for checking, replacing, and adjusting steering and suspension components.
- A brake technician specializes in brake system service and repair.
- The electrical system technician must be able to test and repair lighting systems, charging systems, computer control systems, and starting systems.
- The driveability and performance technician must test and adjust engine fuel, ignition, and emission systems.
- A master technician is an experienced professional who has mastered all specialized areas and is capable of working on almost any part of a vehicle.
- A shop supervisor is in charge of other technicians in a large garage.
- An entrepreneur is someone who starts a business. This might be a muffler shop, tune-up shop, parts house, or similar facility.
- Auto technician certification is a program where persons voluntarily take written tests to prove their knowledge as an auto technician.

### Important Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
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<tbody>
<tr>
<td>Automotive technician</td>
<td>Specialist in brake system service and repair.</td>
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<tr>
<td>Service station attendant</td>
<td>esktop in brake system service and repair.</td>
</tr>
<tr>
<td>Apprentice</td>
<td>Apprentice in brake system service and repair.</td>
</tr>
<tr>
<td>Specialized technician</td>
<td>Specialized in brake system service and repair.</td>
</tr>
<tr>
<td>Master technician</td>
<td>Master of all brake system service and repair.</td>
</tr>
<tr>
<td>Shop supervisor</td>
<td>Shop supervisor in brake system service and repair</td>
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<tr>
<td>Service manager</td>
<td>Service manager in brake system service and repair</td>
</tr>
<tr>
<td>Auto parts specialist</td>
<td>Auto parts specialist in brake system service and repair</td>
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<tr>
<td>Service writer</td>
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<td>Automotive designer</td>
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<tr>
<td>Automotive engineer</td>
<td>Automotive engineer in brake system service and repair</td>
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### Review Questions—Chapter 2

Please do not write in this text. Place your answers on a separate sheet of paper.

1. List four skills that may be needed when working as an automotive technician.
2. Which of the following is not a typical specialized technician?
   (A) Engine technician.
   (B) Steering and suspension technician.
   (C) Brake technician.
   (D) Drive shaft technician.
3. Describe some of the responsibilities of a driveability and performance technician.
4. A(n) specialist may have to do grease jobs.
5. What is a master technician?
6. Explain the job of a service manager.
7. What is a cooperative training program?
8. List the eight test categories of ASE certification.
9. You will receive an(a) and a(n) for each ASE certification exam passed.
10. A(n) is an individual who starts a business.

### ASE-Type Questions

1. Technician A says that an automotive technician must be a “jack of all trades.” Technician B says that the technician's job is seldom boring. Who is right?
   (A) A only.
   (B) Both A and B.
   (C) Neither A nor B.
2. All the following are automatic benefits of ASE certification except:
   (A) recognition.
   (B) a sleeve patch.
   (C) a pay raise.
   (D) a wall certificate.
3. A vehicle comes into the shop for repairs. Technician A says to check with the service writer for the details of the customer complaint. Technician B says to check with the shop supervisor to get information on the complaint. Who is correct?
   (A) A only.
   (B) Both A and B.
   (C) Neither A nor B.
4. A used car needs a wheel alignment. Which technician would usually complete this operation?
   (A) Engine technician.
   (B) Steering and suspension technician.
   (C) Wheel technician.
   (D) Brake technician.
5. Technician A says some ASE questions cover the operation of various automotive systems and components. Technician B says some ASE questions cover the repair of various automotive systems and components. Who is right?
(A) A only.
(B) B only.
(C) Both A and B.
(D) Neither A nor B.

Activities—Chapter 2

1. Research an automotive career of your choice; using a computer or a typewriter, prepare a written report covering such topics as duties, working conditions, pay range, and opportunities for advancement.

2. Interview a manager of a parts department for a local garage. Report on the duties performed.