ASE Auto Test Prep

Free Practice Test — 30 Real Exam-Style Questions

with full answer key & explanations

Practice Questions

Try all 30 first, then check the answer key at the back.

1. What could cause the uneven brake pad wear in the image?

A. Overinflated tires
B. Proper brake adjustment
C. Low transmission fluid
D. Sticking caliper slide or seized piston

2. The brake pedal feels spongy when pressed. Which of the following is the most likely cause?

A. Worn brake pads
B. Leaking master cylinder
C. Air in the brake lines
D. Warped rotors

3. What is the primary method for packing tapered wheel bearings?

A. Using an air compressor
B. Applying grease with a brush
C. Using a grease packing tool
D. Soaking in lubricating oil

4. Which type of brake fluid is specifically known for having low hygroscopic properties?

A. DOT 5
B. DOT 3
C. DOT 4
D. DOT 5.1

5. What is a common method to retract a caliper piston during a brake service?

A. Using pliers
B. Using a hammer
C. Using a screwdriver
D. Using a C-clamp

6. What is the maximum allowable thickness variation for the rotor surfaces in terms of parallelism?

A. 0.001 inches
B. 0.01 inches
C. 0.1 inches
D. 0.005 inches

7. What component is responsible for opening and closing the engine's intake and exhaust valves in time with the pistons' movements?

A. Crankshaft
B. Camshaft
C. Flywheel
D. Alternator

8. What issue might this timing chain cause in an engine?

A. Erratic engine timing
B. High fuel economy
C. Improved performance
D. Stable idle speed

9. During an engine running test, air is found flowing out of the dipstick tube. What is the most likely cause?

A. A clogged air filter
B. A leaking exhaust manifold gasket
C. Blow-by due to worn piston rings
D. A faulty oxygen sensor

10. What is the primary function of valve stem seals in modern engines?

A. To seal the valve seat to the cylinder head
B. To increase the pressure in the combustion chamber
C. To control the amount of oil entering the valve guides
D. To adjust the valve timing

11. Which material is typically used for the construction of chrome rings in internal combustion engines?

A. Aluminum
B. Chromium
C. Copper
D. Brass

12. When inspecting an aluminum engine cylinder head for warpage, what tool is typically used to measure the flatness?

A. Straight edge and feeler gauge
B. Dial indicator
C. Micrometer
D. Torque wrench

13. What is the primary function of the oil pump in an internal combustion engine?

A. To circulate engine oil to various engine parts
B. To filter contaminants from the oil
C. To cool the engine by circulating coolant
D. To regulate oil temperature

14. What tool is often used to assess a battery's state of health in automotive applications?

A. A load tester
B. A hydrometer
C. An ammeter
D. A test light

15. In a series circuit with three resistors, if the voltage supply is 18 volts, and the voltage drop across the first resistor is 5 volts, and the second resistor is 7 volts, what is the voltage drop across the third resistor?

A. 18 volts
B. 5 volts
C. 12 volts
D. 6 volts

16. The windshield wipers on a vehicle stop in the middle of the windshield and do not return to the parked position. What is the most likely cause of this issue?

A. A defective park switch
B. A blown fuse
C. A frozen wiper linkage
D. A faulty ignition switch

17. What is the primary function of a volt in an electrical circuit?

A. Measure electrical resistance
B. Measure electrical flow
C. Measure electrical pressure
D. Measure electrical energy

18. Which component must always be replaced when retrofitting a vehicle's air conditioning system from R-12 to R-134a?

A. Compressor
B. Receiver-drier or accumulator
C. Evaporator
D. Condenser

19. Which of the following is a valid method to detect leaks in an air conditioning system?

A. Scan tool
B. Electronic detector
C. Wrench tightening
D. Cable tester

20. What component compresses the refrigerant and circulates it through the air conditioning system?

A. Receiver-drier
B. Evaporator
C. Condenser
D. Compressor

21. What is the function of the governor valve in an automatic transmission system?

A. Engage or disengage the transmission's planetary gear sets
B. Control the opening and closing of the torque converter clutch
C. Supply fluid to the hydraulic pump
D. Regulate hydraulic pressure based on vehicle speed

22. When installing a torque converter, what is the necessary step before attaching it to the flywheel to ensure proper alignment and function?

A. Fill the torque converter with transmission fluid before installation.
B. Ensure the converter engages all three components: the front pump, stator support, and turbine shaft.
C. Attach the torque converter to the engine block.
D. Bolt the torque converter to the engine before aligning with the transmission.

23. Technician A says a torque converter clutch lock-up eliminates slippage for improved fuel economy. Technician B says a torque converter clutch lock-up prevents transmission overheating. Who is correct?

A. Only Technician A
B. Neither Technician A nor B
C. Both Technician A and B
D. Only Technician B

24. What is the primary function of automatic transmission fluid (ATF) in a vehicle?

A. To enhance brake performance
B. To power the engine by combustion
C. To provide electrical conductivity
D. To lubricate and cool the transmission components

25. What is the primary function of the EGR valve in an internal combustion engine?

A. Increase engine horsepower
B. Reduce NOx emissions
C. Improve fuel economy
D. Enhance engine starting

26. If a vehicle is exhibiting abnormal tire wear but no pull condition, what alignment issue should be suspected?

A. Incorrect thrust angle
B. Incorrect caster
C. Incorrect camber
D. Incorrect toe

27. Which of the following is most likely to cause excessive wear on the inside edge of a tire?

A. Incorrect caster
B. Excessive positive camber
C. Excessive negative camber
D. Incorrect toe setting

28. What component of a tire is responsible for providing the cushioning effect and absorbs most of the impacts during driving?

A. Inner liner
B. Tread
C. Bead
D. Sidewall

29. The final four digits of a tire's DOT code are '1819'. What does '19' indicate?

A. The tire's size designation
B. The manufacture year 2019
C. The manufacturer's identifier
D. The tire's load index

30. What symptom might excessive blow-by gases cause?

A. Stronger fuel economy
B. Higher brake pedal resistance
C. Increased oil consumption and power loss
D. Increased transmission fluid pressure

Answer Key & Explanations

1. D — Sticking caliper slide or seized piston
Uneven wear often indicates a caliper or slide pin issue, causing one side to press harder than the other.

2. C — Air in the brake lines
A spongy brake pedal is typically caused by air trapped in the brake lines. This air compresses when the brake pedal is pressed, which gives the pedal a spongy feel. A leaking master cylinder could also cause brake issues but more often results in a sinking pedal. Worn brake pads and warped rotors usually result in noises or vibrations rather than a spongy pedal feel.

3. C — Using a grease packing tool
Tapered wheel bearings can be packed by forcing grease into them using a dedicated packing tool, ensuring the grease penetrates between the rollers of the bearing. This provides the necessary lubrication and protection from wear.

4. A — DOT 5
DOT 5 brake fluid is silicone-based and known for having low hygroscopic properties, meaning it absorbs minimal moisture from the air. This characteristic makes it ideal for certain applications, especially where moisture absorption could be critical. In contrast, DOT 3, DOT 4, and DOT 5.1 are glycol-based fluids and do absorb moisture.

5. D — Using a C-clamp
A C-clamp is commonly used to push the caliper piston back into its bore when replacing brake pads. This ensures there is sufficient space for the new, thicker pads. Using a hammer, screwdriver, or pliers could damage the piston or the caliper, potentially leading to brake system failure.

6. A — 0.001 inches
Rotor parallelism reflects the uniformity of thickness across the rotor surfaces. The maximum allowable thickness variation is typically 0.001 inches. Exceeding this limit can result in brake pulsation or uneven braking, thus requiring the rotor to be machined or replaced to ensure safe braking performance.

7. B — Camshaft
The camshaft is responsible for opening and closing the engine's intake and exhaust valves in synchronization with the movement of the pistons. It uses lobes (cams) to push against the valves or rocker arms, thereby controlling the timing of the valves in relation to the position of the pistons.

8. A — Erratic engine timing
A loose timing chain can cause the engine's timing to be off, leading to poor performance and potential engine damage.

9. C — Blow-by due to worn piston rings
Air flowing out of the dipstick tube during engine operation is commonly due to blow-by, which occurs when combustion gases escape past worn piston rings into the crankcase. This results in increased crankcase

pressure and air being forced out of the dipstick tube. A leaking exhaust manifold gasket, a clogged air filter, or a faulty oxygen sensor would not cause this particular symptom.

10. C — To control the amount of oil entering the valve guides
Valve stem seals are crucial in regulating the amount of oil that lubricates the valve stems as they move within the valve guides. This ensures minimal oil consumption and reduces emissions from burning excess oil.

11. B — Chromium
Chrome, or chromium, is used in piston rings due to its wear-resistant properties and ability to create a slick surface. This helps in reducing friction and extending the life of the rings and cylinder walls.

12. A — Straight edge and feeler gauge
A straight edge and feeler gauge are commonly used to measure the flatness of an aluminum cylinder head. The straight edge is laid across various points on the head surface, and the feeler gauge is used to measure any gaps that indicate warpage. This method ensures that the surface conforms to manufacturer specifications.

13. A — To circulate engine oil to various engine parts
The oil pump's primary function is to circulate engine oil under pressure to the bearings, pistons, and camshaft of the engine to ensure they are properly lubricated. This circulation reduces friction and helps prevent engine damage caused by metal-to-metal contact.

14. A — A load tester
To evaluate the state of health of a battery, a load tester is typically utilized as it simulates the battery's operating conditions and measures its response. A digital multimeter is used to measure voltage and state of charge, while a hydrometer can be used to check the specific gravity of the battery electrolyte in non-sealed batteries. An ammeter assesses current flow, and a test light is used to confirm the presence of power, but they cannot assess battery health comprehensively.

15. D — 6 volts
In a series circuit, the total voltage supplied is equal to the sum of the voltage drops across all resistors. If the total voltage is 18 volts and the voltage drops across the first two resistors are 5 volts and 7 volts respectively, the remaining voltage drop across the third resistor is 18 - 5 - 7 = 6 volts.

16. A — A defective park switch
The park switch is responsible for ensuring the wipers return to their correct parked position when turned off. If the wipers stop midway and do not return to their parked position, it's likely due to a defective park switch. A blown fuse would cause them to not work at all, a frozen linkage would restrict movement, and a faulty ignition switch does not directly affect wiper parking.

17. C — Measure electrical pressure
Volts are used to measure the electrical pressure, sometimes referred to as electromotive force, within a circuit. It is the push that causes electrons to move through a conductive path. Electrical flow is measured in amperes, resistance in ohms, and electrical energy in joules or watt-hours.

18. B — Receiver-drier or accumulator
When retrofitting A/C systems from R-12 to R-134a, the receiver-drier or accumulator must always be replaced to ensure that the system remains free of moisture and contaminants. This component contains desiccant material that can absorb moisture, which is critical for maintaining system integrity.

19. B — Electronic detector
An electronic detector is specifically designed to sense small amounts of refrigerant escaping from a leak, making it a valid and effective method for finding AC system leaks. Other tools like a scan tool or a cable tester are not suitable for this purpose.

20. D — Compressor
The compressor compresses the refrigerant and circulates it through the air conditioning system. It is driven by the vehicle's engine via a belt and is critical for the functioning of the HVAC system. The evaporator, on the other hand, is where the refrigerant absorbs heat from the passenger compartment, turning from liquid to gas.

21. D — Regulate hydraulic pressure based on vehicle speed
The governor valve in an automatic transmission is responsible for regulating hydraulic pressure as a function of vehicle speed. It provides input to control shift timing based on the vehicle's speed, which helps determine when the transmission should shift to a higher or lower gear.

22. B — Ensure the converter engages all three components: the front pump, stator support, and turbine shaft.
Before securing the torque converter to the flywheel or flexplate, it is crucial to properly engage it with the front pump, stator support, and turbine shaft. This ensures the converter is positioned correctly within the transmission bell housing and prevents damage during operation. The steps involve carefully seating the converter and rotating it until it fully engages with these components, ensuring a seamless connection.

23. C — Both Technician A and B
Both technicians are correct. A torque converter clutch lock-up indeed helps to eliminate slippage, leading to improved fuel economy. Additionally, by minimizing slippage, it reduces excess heat generation within the transmission, thereby helping to prevent overheating.

24. D — To lubricate and cool the transmission components
Automatic transmission fluid (ATF) serves primarily to lubricate the moving parts of the transmission and act as a coolant to keep the transmission operating at ideal temperatures. It also aids in transferring hydraulic pressure in the transmission to perform gear changes.

25. B — Reduce NOx emissions
The EGR (Exhaust Gas Recirculation) valve is designed to re-circulate a portion of the engine's exhaust gases back into the intake manifold. This process reduces the peak combustion temperature, thereby reducing the formation of nitrogen oxides (NOx), which are harmful pollutants.

26. D — Incorrect toe
Incorrect toe settings can cause abnormal tire wear without necessarily causing a pull condition. Toe is the alignment angle affecting the angle of the tires in relation to the centerline of the vehicle. When the toe is not set properly, it can lead to irregular tire wear while the vehicle still maintains a straight path.

27. C — Excessive negative camber
Excessive negative camber causes the top of the tire to lean inward, placing more pressure on the inner edge, which leads to excessive wear. Positive camber would cause wear on the outer edge, incorrect caster affects steering but not directly the tire edges, and incorrect toe setting generally causes feathering across the tire tread.

28. D — Sidewall
The sidewall of a tire provides flexibility and absorbs shocks from the road, offering a cushioning effect during driving. While the tread provides traction and the inner liner keeps air sealed within the tire, the bead helps the tire adhere to the rim. None of these parts absorb impacts like the sidewall does.

29. B — The manufacture year 2019
The last four digits of a DOT code on a tire indicate the week and year it was manufactured. '19' in the code represents the year 2019, while '18' indicates the 18th week of that year.

30. C — Increased oil consumption and power loss
Excessive blow-by indicates worn piston rings or cylinder wall issues, leading to oil loss and reduced efficiency.

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