

Automotive Technology Fundamentals

Automotive Technology · Answer Key · 25 Questions

1. What is the primary function of an automotive alternator?

- A) To store electrical energy
- B) To convert mechanical energy into electrical energy**
- C) To ignite the fuel-air mixture
- D) To regulate the transmission gear ratios

2. Which component is responsible for timing the opening and closing of engine valves?

- A) Crankshaft
- B) Camshaft**
- C) Flywheel
- D) Connecting rod

3. In a four-stroke engine, which stroke follows the power stroke?

- A) Intake
- B) Compression
- C) Exhaust**
- D) Combustion

4. What is the purpose of the catalytic converter in a vehicle's exhaust system?

- A) To increase horsepower
- B) To reduce harmful emissions**
- C) To muffle engine noise
- D) To filter engine oil

5. Which fluid is primarily used to operate a hydraulic braking system?

- A) Transmission fluid
- B) Engine coolant
- C) Brake fluid**
- D) Windshield washer fluid

6. What is the stoichiometric air-fuel ratio for gasoline engines?

- A) 10:1
- B) 14.7:1**
- C) 20:1
- D) 12.5:1

7. Which type of drivetrain sends power to all four wheels of the vehicle?

- A) FWD
- B) RWD
- C) AWD**
- D) CVT

8. What does the acronym ABS stand for in vehicle safety systems?

- A) Automatic Braking System
- B) Anti-lock Braking System**
- C) Advanced Battery Storage
- D) Automated Balancing Suspension

9. What is the main function of the engine oil pump?

- A) To cool the engine block
- B) To lubricate moving engine parts**
- C) To clean the air intake
- D) To inject fuel into the cylinders

10. Which automotive component utilizes a clutch or torque converter?

- A) Braking system
- B) Transmission**
- C) Suspension
- D) Steering column

11. What is the role of the radiator in an internal combustion engine?

- A) To dissipate heat from the coolant**
- B) To regulate fuel pressure
- C) To generate spark for ignition
- D) To store compressed air

12. Which sensor monitors the amount of oxygen in the exhaust gases?

- A) MAF sensor
- B) O2 sensor**
- C) MAP sensor
- D) TPS sensor

13. What does the 'T' in CVT stand for?

- A) Transmission**
- B) Torque
- C) Traction
- D) Turbo

14. Which device is used to increase the pressure of the air entering an engine to increase power?

- A) Alternator
- B) Supercharger**
- C) Differential
- D) Distributor

15. Where is the timing belt typically located?

- A) Inside the transmission
- B) Between the crankshaft and camshaft**
- C) Attached to the wheels
- D) Inside the exhaust manifold

16. What is the primary function of the vehicle's thermostat?

- A) To control interior cabin temperature
- B) To regulate engine coolant flow**
- C) To measure oil pressure
- D) To track vehicle speed

17. Which automotive system uses tie rods and ball joints?

- A) Braking system
- B) Fuel system
- C) Steering system**
- D) Cooling system

18. What type of engine configuration has cylinders arranged in two banks at an angle?

- A) Inline engine
- B) Rotary engine
- C) V-engine**
- D) Flat engine

19. What is the function of the spark plug in a petrol engine?

- A) To deliver high voltage to ignite the air-fuel mixture**
- B) To provide power to the radio
- C) To regulate the idle speed
- D) To filter the fuel

20. Which component connects the transmission to the drive wheels?

- A) Drive shaft**
- B) Piston
- C) Fuel pump
- D) Cylinder head

21. What is the purpose of a differential in a vehicle?

A) To allow wheels to rotate at different speeds

- B) To shift gears automatically
- C) To cool the transmission oil
- D) To lock the engine at high speeds

22. What does the acronym ECU stand for in automotive electronics?

A) Engine Control Unit

- B) Electrical Charging Utility
- C) Exhaust Cooling Unit
- D) Energy Conversion Unit

23. Which battery terminal is typically connected to the vehicle chassis (ground)?

A) Positive

B) Negative

- C) Neutral
- D) Ignition

24. What is the purpose of the wastegate in a turbocharged engine?

A) To recycle engine oil

B) To control boost pressure

- C) To filter exhaust emissions
- D) To cool the intake air

25. Which component allows the engine to keep running while the vehicle is stationary?

A) Brake booster

B) Clutch

- C) Fuel injector
- D) AC compressor