Automotive Technology Basics

Automotive Technology · Answer Key · 25 Questions

1. What is the primary function of an alternator in a vehicle?

A) To ignite the fuel mixture
B) To charge the battery while the engine is running
C) To cool the engine coolant
D) To provide torque to the wheels

2. Which component is responsible for regulating the temperature of an internal combustion engine?

A) Thermostat
B) Fuel pump
C) Alternator
D) Flywheel

3. In a four-stroke engine, which stroke compresses the air-fuel mixture?

A) Intake
B) Power
C) Compression
D) Exhaust

4. What does the acronym ABS stand for in automotive braking systems?

A) Automatic Braking System
B) Anti-lock Braking System
C) Advanced Battery Storage
D) Axle Balance Sensor

5. Which fluid is primarily used to lubricate the internal moving parts of an engine?

A) Brake fluid
B) Coolant
C) Engine oil
D) Transmission fluid

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

A) To muffle engine noise
B) To convert toxic pollutants into less harmful gases
C) To increase fuel efficiency
D) To store excess fuel

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7. Which component connects the transmission to the wheels in a rear-wheel-drive vehicle?

A) Driveshaft
B) Spark plug
C) Carburetor
D) Distributor

8. What is the stoichiometric ratio of air to fuel for a gasoline engine?

A) 10:1
B) 14.7:1
C) 20:1
D) 5:1

9. Which sensor measures the amount of oxygen in the exhaust gases?

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

10. What does the 'T' in 'TDI' stand for in diesel engines?

A) Transmission
B) Turbocharged
C) Torque
D) Timed

11. Which device converts reciprocating motion into rotational motion in an engine?

A) Crankshaft
B) Camshaft
C) Timing belt
D) Piston ring

12. What is the function of the spark plug in a gasoline engine?

A) To measure fuel pressure
B) To ignite the air-fuel mixture
C) To inject fuel into the cylinder
D) To lubricate the valves

13. Which part of the car's electrical system stores energy for starting the engine?

A) Generator
B) Starter motor
C) Lead-acid battery
D) Fuse box

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14. What type of suspension system uses a single arm to connect the wheel hub to the vehicle frame?

A) MacPherson strut
B) Solid axle
C) Leaf spring
D) Torsion bar

15. Which gear in a manual transmission is typically used to move the vehicle in reverse?

A) First gear
B) Second gear
C) Reverse gear
D) Neutral gear

16. What is the primary role of the timing belt or chain?

A) To drive the wheels
B) To synchronize the rotation of the crankshaft and camshaft
C) To power the air conditioning
D) To provide electrical current to the lights

17. Which automotive component is responsible for reducing engine vibrations?

A) Radiator
B) Engine mount
C) Brake rotor
D) Fuel injector

18. What is the function of a differential in a vehicle?

A) To allow wheels to rotate at different speeds during turns
B) To steer the vehicle
C) To lock the engine speed
D) To monitor tire pressure

19. Which indicator light on a dashboard typically suggests an issue with the engine's management system?

A) Oil pressure light
B) Check engine light
C) High beam indicator
D) Seatbelt warning

20. What is the substance used in modern vehicles to help reduce nitrogen oxide emissions?

A) AdBlue
B) Motor oil
C) Brake fluid
D) Transmission oil

21. Which component is designed to dissipate heat from the engine coolant?

A) Condenser
B) Radiator
C) Heater core
D) Oil filter

22. What does the term 'displacement' refer to in an engine?

A) The top speed of the vehicle
B) The total volume of the cylinders
C) The weight of the engine
D) The fuel tank capacity

23. Which part acts as a seal between the engine block and the cylinder head?

A) Valve cover gasket
B) Head gasket
C) Oil pan gasket
D) Intake manifold gasket

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

A) To heat up the fuel
B) To cool the intake air
C) To lubricate the turbocharger
D) To reduce exhaust backpressure

25. Which component converts chemical energy from fuel into mechanical energy?

A) Battery
B) Engine
C) Differential
D) Steering rack

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