TEST YOUR AUTOMOTIVE TECHNICAL KNOWLEDGE

This self-test can help you determine how much you really know about this subject. Questions are written in the ASE style format and are multiple choice.

The answer key is on the last page.

There are also links to related articles on the https://www.AA1Car.com website.
Good luck!

OBD2 BASICS SELF-TEST

1. Technician A says the OnBoard Diagnostic (OBD2) system detects problems that may cause an increase in vehicle emissions.
Technician B says a CHECK ENGINE light that comes on and remains on while driving indicates a fault code has been stored in the OBD2 system.
Who is right?
a. Technician A only
b. Technician B only
c. Both Technician A and B
d. Neither one

2. Which of the following conditions might cause the CHECK ENGINE light to flash repeatedly while driving?
a. Catalytic converter malfunction
b. Loose gas cap
c. Cylinder misfire
d. A bad engine sensor

3. A P0300 Fault Code means what?
a. Loose Gas Cap
b. Random engine misfire
c. Catalytic converter failure
d. Engine overheating

4. To pass a plug-in OBD2 emissions test at a state vehicle inspection facility, which of the following is NOT required?
a. No fault codes in the OBD2 memory
b. All system monitors have completed their self-tests
c. A tailpipe emissions check
d. A functioning Check Engine light that is OFF

5. Technician A says the OBD2 system only monitors emission controls, the gas cap and the catalytic converter.

Technician B says the OBD2 system can also detect ignition, fuel and air/fuel mixture problems.

Who is right?

a. Technician A only
b. Technician B only
c. Both Technician A and B
d. Neither Technician A nor B

6. The OBD2 Diagnostic Connector Link (DCL) is usually located where in most vehicles?

a. In the engine compartment near the power center
b. In the engine compartment near the battery
c. Inside the vehicle, under the instrument panel near the steering column
d. In the trunk or luggage compartment near the spare tire

7. A basic do-it-yourself scan tool can read Diagnostic Trouble Codes (DTCs), sensor data, monitor status, system voltages, switch and loop status. But it cannot do which of the following?

a. Perform bi-directional self-tests to check certain components
b. Help you diagnose and repair common emission faults
c. Tell you if your vehicle is ready for an OBD2 plug-in emissions check
d. Erase stored fault codes

8. OBD2 is found on which model year vehicles?

a. All MY1985 and newer cars and light trucks
b. All MY1990 and newer cars and light trucks
c. All MY 1996 and newer cars and light trucks
d. All MY 2000 and newer cars and light trucks

9. The Federal Emissions Warranty on the OBD2 control module, diagnostic connector and catalytic converter is how long?

a. 2 years or 24,000 miles
b. 3 years or 36,000 miles
c. 5 years or 50,000 miles
d. 8 years or 80,000 miles

10. Technician A says it is legal to remove the catalytic converters from a street-driven vehicle to improve fuel economy and performance.

Technician B says the OBD2 Misfire Monitor only checks for misfires once per drive cycle.

Who is right?

a. Technician A only
b. Technician B only
c. Both technician A and B
d. Neither Technician A nor B

11. A loose or missing gas cap will increase what kind of emissions?

a. Evaporative emissions
b. Tailpipe emissions
c. Crankcase emissions
d. Has no effect on emissions

12. How does the OBD2 system monitor the operating efficiency of a catalytic converter?

a. It monitors backpressure in the exhaust system
b. It compares upstream and downstream O2 sensor readings
c. It monitors the temperature of the exhaust
d. It monitors fuel economy and engine misfires

13. How does the OBD2 system monitor the EVAP system?

a. It performs a pressure or vacuum test to check for fuel vapor leaks
b. It monitors fuel pressure
c. It monitors the air/fuel ratio
d. It runs a self-check on fuel injectors and fuel pump

14. A P0455 is a common EVAP fault code. What does it mean?

a. A LARGE EVAP leak (probably a loose or missing gas cap)
b. A SMALL EVAP leak (probably a crack or pinhole leak in a hose)
c. A defective PURGE VALVE
d. A defective VAPOR STORAGE CANISTER

15. The OBD2 FUEL SYSTEM MONITOR keeps a watchful eye over what?

a. The fuel level in the fuel tank
b. Fuel vapor leaks from the engine, fuel tank or gas cap
c. Changes in the air/fuel mixture
d. Change in fuel pressure

16. Technician A says a defective COOLANT SENSOR may prevent an engine from going into CLOSED LOOP, which in turn may increase emissions.

Technician B says a faulty MASS AIRFLOW SENSOR can upset the air/fuel mixture, which in turn may increase emissions.

Who is right?

a. Technician A only
b. Technician B only
c. BOTH Technician A and B
d. Neither Technician A nor B

17. How often does the EVAP monitor perform its self-checks?

a. Once a drive cycle if certain temperature, fuel level and other conditions are met
b. Once every drive cycle regardless of temperature, fuel level or other conditions
c. Multiple times during any drive cycle
d. After filling the gas tank

18. A "LEAN CODE" (P0171 or P0174) means what?

a. Short Term Fuel Trim and Long Term Fuel Trim do not agree
b. Short Term Fuel Trim and Long Term Fuel Trim do not change
c. The Air/Fuel mixture is running too lean (too much air, not enough fuel)
d. The Air/Fuel mixture is running too rich (too much fuel, not enough air)

19. ANY of the following may cause a LEAN Code EXCEPT:

a. A Dirty catalytic converter
b. Dirty fuel injectors
c. Dirty Mass Airflow (MAF) sensor
d. Engine vacuum leak

20. Technician A says a bad O2 sensor will often cause a vehicle to fail an emissions test.
Technician B says the EGR valve's main purpose is to minimize Oxides of Nitrogen (NOx) emissions.
Who is right?

a. Technician A only
b. Technician B only
c. Both technician A and B
d. Neither Technician A nor B

21. Technician A says a fault code will always tell you which component to replace.
Technician B says looking at "HISTORY CODES" with a scan tool will tell you what kind of faults have occurred in the past.
Who is right?

a. Technician A only
b. Technician B only
c. Both technician A and B
d. Neither Technician A nor B

22. What is a "GENERIC" or "GLOBAL" OBD2 fault code?

a. It is a code with a common definition for all vehicle makes/models
b. It is a code specific to a certain vehicle make or model only
c. It is a code that can only be read by a generic or global scan tool
d. It is a code that cannot be read by an OEM or factory scan tool

23. Which of the following would NOT be a CONTINUOUS OBD2 monitor?

a. Catalytic converter monitor
b. Engine misfire monitor
c. Engine sensor monitors
d. Fuel system monitor

24. Technician A says FLASH REPROGRAMMING the engine computer may be necessary to solve certain types of engine performance and OBD2 emissions problems.
Technician B says a J2534 scan tool or Pass-Thru tool is required to FLASH REPROGRAM an engine computer.
Who is right?

a. Technician A only
b. Technician B only
c. BOTH Technician A and B
d. Neither Technician A nor B

25. Which of the following would NOT prevent a vehicle from passing a plug-in OBD2 test?

a. A system monitor that has not completed
b. A fault code and illuminated Check Engine Light
c. A nonoperative Check Engine light or DCL connector
d. An Engine Temperature warning light

(Answer Key on Next Page)

ANSWER KEY

1C, 2C, 3B, 4C, 5B, 6C, 7A, 8C, 9D, 10D, 11A, 12B, 13A, 14a, 15C, 16C, 17A, 18C, 19A, 20C, 21B, 22A, 23A, 24C, 25D

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