Automotive Technology 6th Edition
Chapter 74 - Temperature Sensors
Quiz 74B

Name_____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1) A P0118 DTC is being discussed. Technician A says that the ECT sensor could be shorted internally.
Technician B says that the signal wire could be open. Who is right? 1) _____
A) Technician A only
B) Technician B only
C) Both technicians
D) Neither technician

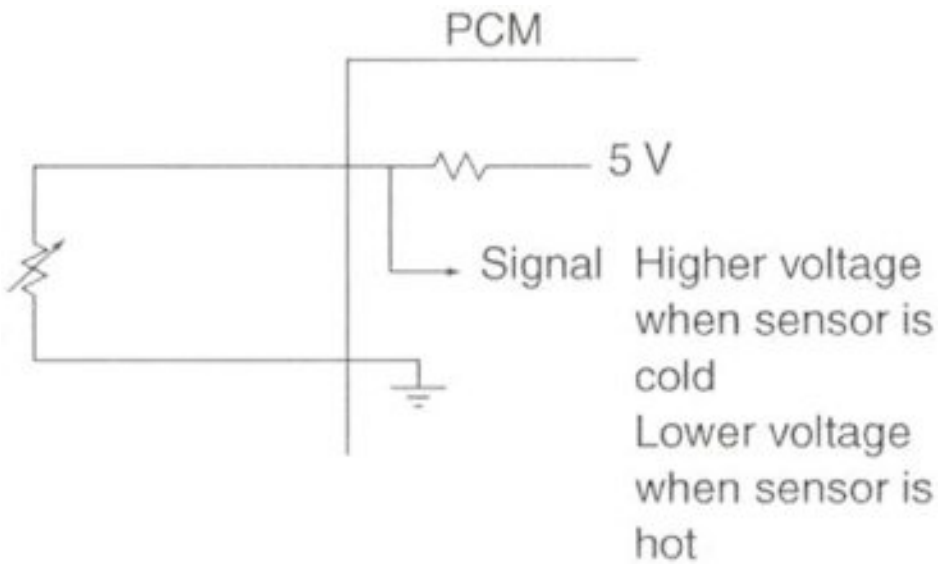
2) A typical IAT or ECT sensor reads about 3000 ohms when tested using a DMM. This resistance represents a temperature of about _____. 2) _____
A) –40° F (–40° C)
B) 70° F (20° C)
C) 120° F (50° C)
D) 284° F (140° C)

3) Technician A says that the ECT and IAT sensors can be tested visually, as well as by using a digital multimeter or a scan tool. Technician B says that the ECT sensor is a high-authority sensor at engine start-up and is used for open-loop control, as well as idle speed. Who is right? 3) _____
A) Technician A only
B) Technician B only
C) Both technicians
D) Neither technician

4) A P0113 DTC is being discussed. Technician A says that the IAT sensor could be internally (electrically) shorted. Technician B says that the PCM could be defective. Who is right? 4) _____
A) Technician A only
B) Technician B only
C) Both technicians
D) Neither technician

5) All of the following are approved methods or tools used when diagnosing an ECT (engine coolant temperature) sensor EXCEPT _____. 5) _____
A) scan tool
B) digital multimeter (DMM)
C) observing resistance values at a specified temperature
D) substituting a variable resistor

6) What type of circuit is shown in this schematic? 6) _____



A) Step–up transformer circuit
B) Negative temperature coefficient (NTC) thermistor circuit
C) Positive temperature coefficient (PTC) thermistor circuit
D) Oxygen (O2S) sensor circuit

7) A P0117 DTC is being discussed. Technician A says that the ECT sensor could be internally shorted to ground. Technician B says that the signal wire could be open. Who is right? 7) _____
A) Technician A only
B) Technician B only
C) Both technicians
D) Neither technician

8) The IAT is being tested. After the vehicle has been allowed to cool for several hours, a scan tool is used to observe the IAT, and compare it to the engine coolant temperature (ECT). The two temperatures should be within how many degrees F of each other? 8) _____
A) 5
B) 10
C) 15
D) 25

9) Technician A says that temperature sensors decrease in resistance as the temperature increases; this is called positive temperature coefficient (PTC). Technician B says that some vehicle manufacturers use a stepped ECT circuit inside the PCM to broaden the accuracy of the sensor. Who is right? 9) _____
A) Technician A only
B) Technician B only
C) Both technicians
D) Neither technician

10) Technician A says that other temperature sensors that operate like the ECT include transmission fluid temperature (TFT), and engine oil temperature sensors. Technician B says that all temperature sensors increase in resistance as the temperature decreases. Who is right? 10) _____

A) Technician A only
B) Technician B only
C) Both technicians
D) Neither technician

Answer Key
Testname: AT6_74B

1) B
Page Ref: 882
2) B
Page Ref: 876
3) C
Page Ref: 874-875
4) B
Page Ref: 882
5) D
Page Ref: 876-877
6) B
Page Ref: 881
7) A
Page Ref: 882
8) A
Page Ref: 880
9) B
Page Ref: 874-875
10) A
Page Ref: 874