Automotive Electrical and Engine Performance, 8th Edition
Quiz 31A

Name_____

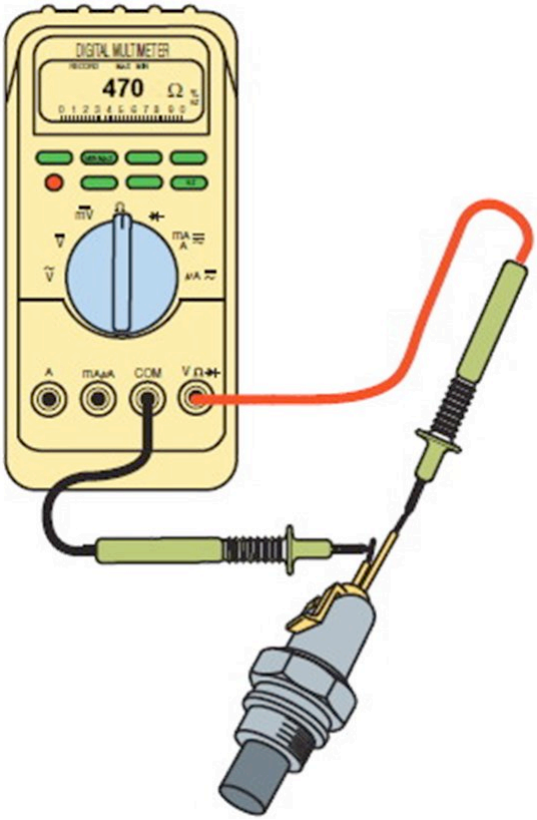
MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1) Two technicians are discussing the IAT sensor. Technician A says that the IAT sensor is more important to the operation of the engine (higher authority) than the ECT sensor. Technician B says that the PCM will add fuel if the IAT indicates that the incoming air temperature is cold. Which technician is correct? 1) _____
   A) Technician A only
   B) Technician B only
   C) Both technicians A and B
   D) Neither technician A nor B

2) If the transmission fluid temperature (TFT) sensor indicates cold automatic transmission fluid temperature, what would the PCM do to the shifts? 2) _____
   A) Normal shifts and normal operation of the torque converter clutch
   B) Disable torque converter clutch; normal shift points
   C) Delayed shift points and torque converter clutch disabled
   D) Normal shifts but overdrive will be disabled

3) A DTC P0113 DTC is being discussed. Technician A says that the IAT sensor could be internally (electrically) shorted to ground. Technician B says that the PCM could be defective. Which technician is correct? 3) _____
   A) Technician A only
   B) Technician B only
   C) Both technicians A and B
   D) Neither technician A nor B

4) This DVOM reading indicates a temperature of about _____ for a GM ECT sensor. 4) _____



A) 70°C
B) 70°F
C) Either A or B
D) Neither A nor B

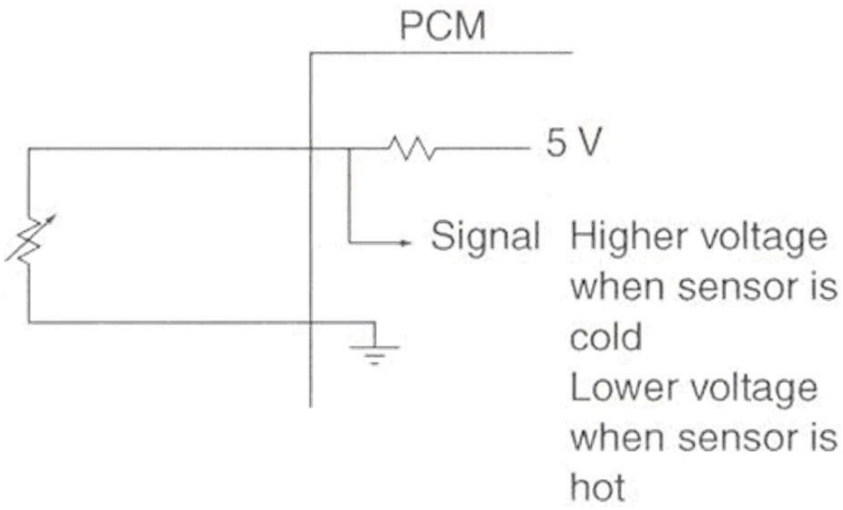
5) When checking the ECT sensor with a scan tool, about what temperature should be displayed if the connector is removed from the sensor with the key on, engine off? 5) _____

A) 284°F (140°C)
B) 230°F (110°C)
C) 120°F (50°C)
D) –40°F (–40°C)

6) What happens to the voltage measured at the ECT sensor when the thermostat opens? 6) _____

A) Increases slightly
B) Increases about 1 volt
C) Decreases slightly
D) Decreases about 1 volt

7) In the below illustration what type of circuit is depicted? 7) _____



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

8) Technician A says that the purpose of the intake air temperature (IAT) sensor is to provide the engine computer (PCM) with the temperature of the air entering the engine. Technician B says that the IAT sensor information is used for fuel control (adding or subtracting fuel) and spark timing, depending on the temperature of incoming air. Which technician is correct? 8) _____

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

9) Technician A says that other temperature sensors that operate like the ECT include the transmission fluid temperature (TFT), and cylinder head temperature sensor. Technician B says that all temperature sensors increase in resistance as the temperature decreases. Which technician is correct? 9) _____

A) Technician A only
B) Technician B only
C) Both technicians A and B
D) Neither technician A nor B

10) A typical IAT or ECT sensor reads about 3000 ohms when tested using a DMM. This resistance represents a temperature of about _____. 10) _____

A) –40°F (–40°C)
B) 70°F (20°C)
C) 120°F (50°C)
D) 284°F (140°C)

Answer Key
Testname: AEEP8_31A

1) B
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2) C
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3) B
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4) A
Page Ref: 511
5) D
Page Ref: 509
6) A
Page Ref: 508
7) B
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8) C
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9) A
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10) B
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