

Name \_\_\_\_\_

**SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.**

1) What are the three ways that temperature sensors can be tested?

---

---

---

2) What is the difference between a stepped and a non-stepped ECT circuit?

---

---

---

3) What temperature should be displayed on a scan tool if the ECT sensor is unplugged with the key on, engine off?

---

---

---

4) How does a typical NTC temperature sensor work?

---

---

---

5) If the transmission fluid temperature (TFT) sensor were to fail open (as if it were unplugged), what would the PCM do to the transmission shifting points?

---

---

---

## Answer Key

Testname: AEPP8\_SHORT31

- 1) Temperature sensors can be tested by visual inspection, resistance, and by using a scan tool to monitor the operation (reading) of the sensor as the engine operates.  
Page Ref: 504; 508
- 2) A stepped ECT circuit uses a pull-up resistor inside the PCM to give the ECT a broader, more accurate reading of the coolant temperature. A non-stepped ETC sensor does not have this pull-up resistor.  
Page Ref: 503
- 3) If the ECT is unplugged, a scan tool will display  $-40^{\circ}\text{F}$  ( $-40^{\circ}\text{C}$ ).  
Page Ref: 509
- 4) A typical NTC sensor decreases in resistance as the temperature increases. In other words, it becomes more electrically conductive as the temperature increases.  
Page Ref: 503
- 5) If the TFT sensor were to fail open, the automatic transmission would likely have the shift points delayed to help assist in the heating of the fluid.  
Page Ref: 512