

Name \_\_\_\_\_

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

- 1) Knowledge of parallel circuit fundamentals is necessary to diagnose \_\_\_\_\_. 1) \_\_\_\_\_  
A) Port fuel injection circuits  
B) Diesel glow plug circuits  
C) Add-on lighting circuits  
D) All of these
- 2) More electrical current will tend to flow through the branch of a parallel circuit with \_\_\_\_\_ resistance. 2) \_\_\_\_\_  
A) Lowest  
B) Highest  
C) Infinite  
D) None of these
- 3) Calculate the total resistance and current in a parallel circuit with three resistors of 4 ohms, 8 ohms, and 16 ohms, using any one of the five methods (calculator suggested). What are the values? 3) \_\_\_\_\_  
A) 28 ohms (0.4 amperes)  
B) 14 ohms (0.8 amperes)  
C) 4 ohms (3.0 amperes)  
D) 2.3 ohms (5.3 amperes)
- 4) A six-cylinder engine uses six fuel injectors connected electrically in two groups of three injectors in parallel. What would be the resistance if three 12-ohm injectors were connected in parallel? 4) \_\_\_\_\_  
A) 36 ohms  
B) 12 ohms  
C) 4 ohms  
D) 3 ohms
- 5) A vehicle has four taillight bulbs all connected in parallel. If one bulb burns out (opens), the total current flow in the circuit \_\_\_\_\_. 5) \_\_\_\_\_  
A) Increases, and the other bulbs get brighter  
B) Decreases because only three bulbs are operating  
C) Remains the same because all the bulbs are wired in parallel  
D) Drops to zero, and the other three bulbs go out
- 6) The voltage drop on each branch of a parallel circuit is \_\_\_\_\_. 6) \_\_\_\_\_  
A) Equal  
B) Reduced by the resistance of loads in each branch  
C) Increased by the resistance of loads in each branch  
D) None of these

- 7) A parallel circuit has 8 loads (resistances). Three of the loads are 60 ohms each; four of the loads are 120 ohms each; the remaining load has a resistance of 10 ohms. What is the ESTIMATED total resistance of this circuit? 7) \_\_\_\_\_
- A) Less than 10 ohms
  - B) At least 120 ohms
  - C) About 670 ohms
  - D) Not enough information
- 8) The current flowing into each junction of a parallel circuit \_\_\_\_\_ the current flow at the junction on the opposite end of that branch. 8) \_\_\_\_\_
- A) Equals
  - B) Is less than
  - C) Is more than
  - D) None of these
- 9) The sum of currents in each branch of a parallel circuit will \_\_\_\_\_ total circuit current. 9) \_\_\_\_\_
- A) Equal
  - B) Be more than
  - C) Be less than
  - D) None of these
- 10) The total circuit resistance of a parallel circuit is always \_\_\_\_\_ the lowest resistance present in any branch of the circuit. 10) \_\_\_\_\_
- A) Less than
  - B) More than
  - C) Equal to
  - D) None of these

## Answer Key

Testname: AEE6\_7B

1) D

Page Ref: 79-80

2) A

Page Ref: 80-82

3) D

Page Ref: 81-84

4) C

Page Ref: 83-84

5) B

Page Ref: 80-83

6) A

Page Ref: 80-82

7) A

Page Ref: 82-83

8) A

Page Ref: 89

9) A

Page Ref: 80

10) A

Page Ref: 80-82