For each question below, fill in the bubble for the **BEST** answer.

1. The figures below show a light bulb connected to a battery in two different ways. When the switch in Figure 1 is closed, the bulb will light. What will happen when the switch is closed in Figure 2?

   ![Figure 1](image1)
   ![Figure 2](image2)

   ☐ The bulb will light just as it did in Figure 1.
   ☐ The bulb will be brighter than it was in Figure 1.
   ☐ The bulb will light, but it will be less bright than it was in Figure 1.
   ☐ The bulb will not light at all.

2. Which picture shows a circuit that will cause the bulb to light up?

   ![Option A](image3)
   ![Option B](image4)
   ![Option C](image5)
   ![Option D](image6)

   **ANSWER KEY**
3. The picture to the right shows two bulbs and a switch in a circuit. Which of the bulbs can be turned on and off by the switch?

- bulb 1
- bulb 2
- both bulbs
- neither bulb

4. Which set of parts could you replace with wire in the circuit below? You should still have a safe and complete circuit.

- battery and bulb
- battery and buzzer
- switch and bulb
- switch, bulb, and buzzer

5. The picture to the right shows two bulbs and a switch in a circuit. Which of the bulbs can be turned on and off by the switch?

- bulb 1
- bulb 2
- both bulbs
- neither bulb
6. In which circuit below will both bulbs light?

7. The picture below shows two bulbs and a switch in a circuit. Which of the bulbs can be turned on and off by the switch?

- bulb 1
- bulb 2
- both bulbs
- neither bulb

8. The picture to the right shows a glowing light bulb connected to a battery using wires. An electric current is flowing from the battery, through Wire #1, to the bulb.

What is happening in Wire #2?

- The electricity flows through Wire #2 from the battery to the bulb.
- The electricity flows through Wire #2 away from the bulb to the battery.
- No electricity flows in Wire #2, it is all used up by the bulb.
- Electricity flows both ways through Wire #2, from the battery to the bulb and back again.
The picture below shows three light bulbs in a circuit. Use the picture to answer questions 9 and 10.

9. Where should you put a switch so that bulb 2 and bulb 3 can be switched on and off, but bulb 1 will stay on all the time?

- location A  
- location B

- location C  
- location D

10. Where should you put a switch so that bulb 2 can be turned on and off, but bulb 1 and bulb 3 will remain on all the time?

- location A  
- location B

- location C  
- location D

Question 3 from MCAS 2007 STE Assessment- Gr 5.  
Question 4 from MCAS 2003 Science and Technology/Engineering (STE) Assessment - Grade 5.  
Question 9 from MCAS 2010 STE Assessment- Gr 5.  
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