Automotive Technology 7th Edition
Chapter 49
Multiple Choice Quiz B

Name: _____ Date: _____

1. What is the purpose of the pole shoes in a starter motor?
A. To generate electrical current.
B. To support the armature.
C. To create a magnetic field when energized.
D. To reduce friction inside the starter.

2. What is the role of the armature inside the field coils of a starter motor?
A. To generate electrical power.
B. To rotate and interact with the magnetic field.
C. To insulate the starter from heat.
D. To regulate the flow of current.

3. Why is insulation between the laminations of an armature important?
A. To reduce weight.
B. To increase magnetic efficiency.
C. To improve electrical conductivity.
D. To enhance the appearance of the armature.

4. What is the significance of counter-electromotive force (CEMF) in a series starter motor?
A. It increases the starter's torque.
B. It reduces the starter's speed.
C. It operates against the applied voltage from the battery.
D. It enhances the starter's efficiency.

5. What is the primary function of the starter solenoid in the cranking circuit?
A. To generate electrical power.
B. To control the high current required by the starter.
C. To regulate the speed of the starter motor.
D. To cool down the starter during operation.

6. In a shunt-type electric motor, how are the field coils connected?
A. In parallel with the armature.
B. In series with the armature.
C. Directly to the battery.
D. Directly to the starter solenoid.

7. What is the primary advantage of a permanently engaged starter?
A. It delivers quicker and quieter restart times.
B. It is more durable.
C. It requires less maintenance.
D. It is more energy efficient.

8. In a series-wound electric motor, what happens to the magnetic field strength as the starter speed increases?
A. It remains constant.
B. It increases.
C. It decreases.
D. It fluctuates unpredictably.

9. What is the primary purpose of the field coils in a starter motor?
A. To generate electrical power.
B. To create a strong magnetic field inside the starter.
C. To regulate the speed of the starter motor.
D. To cool down the starter during operation.

10. In the context of starter motors, what does CEMF stand for?
A. Central Electromotive Force.
B. Circular Electromotive Function.
C. Counter-Electromotive Force.
D. Continuous Electromagnetic Field.

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Answer Key

1. C

2. B

3. B

4. C

5. B

6. A

7. A

8. C

9. B

10. C