

Name _____

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

- 1) Which safety device is used on vehicles with manual transmissions? 1) _____
 - A) Clutch safety switch
 - B) Neutral safety switch
 - C) Both A and B
 - D) Neither A nor B

- 2) Permanent magnets are commonly used for what part of the starter? 2) _____
 - A) The armature
 - B) The solenoid
 - C) The field coils
 - D) The commutator

- 3) A stop-start system includes what components? 3) _____
 - A) A special starter
 - B) An AGM or ELA battery
 - C) A switch to turn the system off in some vehicles
 - D) All of the above

- 4) On a vehicle equipped with a stop/start system, the engine stops when the vehicle is stopped at a traffic light. This system increases _____. 4) _____
 - A) fuel economy
 - B) CO2 emissions
 - C) hydrocarbon emissions
 - D) idle speed

- 5) Which unit contains a hold-in winding and a pull-in winding? 5) _____
 - A) The field coil
 - B) The starter solenoid
 - C) The armature
 - D) The ignition switch

- 6) A starter can be constructed in a smaller size due to the use of _____ and permanent magnets. 6) _____
 - A) thinner oil
 - B) gear reduction
 - C) voltage reduction
 - D) single brushes

- 7) The overrunning clutch (starter drive) accomplishes which of the following? 7) _____
 - A) Separates the starter motor from the starter solenoid
 - B) Brings the starter motor into contact with the ignition circuit
 - C) Lets the starter motor rotate in either direction
 - D) Protects the starter motor from spinning too rapidly

- 8) The brushes are used to transfer electrical power between _____. 8) _____
- A) field coils and the armature
 - B) the commutator and the segments
 - C) the solenoid and the field coils
 - D) the armature and the solenoid
- 9) Starter motors operate on the principle that _____. 9) _____
- A) the field coils rotate in the opposite direction from the armature
 - B) opposite magnetic poles repel
 - C) like magnetic poles repel
 - D) the armature rotates from a strong magnetic field toward a weaker magnetic field
- 10) Which starting system component uses a small amount of current to control a large amount of current? 10) _____
- A) Starter solenoid or relay
 - B) Starter brushes
 - C) Starter drive
 - D) Neutral safety switch