

Name \_\_\_\_\_

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

- 1) The types of frames used include \_\_\_\_\_. 1) \_\_\_\_\_
  - A) Full frame
  - B) Ladder frame
  - C) Stub-type frame
  - D) Any of the above, depending on the vehicle
  
- 2) A MacPherson strut is a structural part of the vehicle. 2) \_\_\_\_\_
  - A) True
  - B) False
  
- 3) In a rack and pinion steering gear, which part is the rack? 3) \_\_\_\_\_
  - A) The part rotated by the driver
  - B) The part that is bolted to the frame
  - C) The part that is moved side to side when the steering wheel is turned
  - D) The steering wheel itself
  
- 4) Which is a type of spring? 4) \_\_\_\_\_
  - A) Coil
  - B) Leaf
  - C) Torsion bar
  - D) All of the above
  
- 5) Technician A says that tie rod ends are used to connect the steering linkage to the steering knuckles. Technician B says that some ball and socket joints are sealed and do not require lubrication. Which technician is correct? 5) \_\_\_\_\_
  - A) Technician A only
  - B) Technician B only
  - C) Both technicians
  - D) Neither technician
  
- 6) Technician A says that the pitman arm is connected to the steering gear. Technician B says that an idler arm is used with all rack and pinion steering linkages. Which technician is correct? 6) \_\_\_\_\_
  - A) Technician A only
  - B) Technician B only
  - C) Both technicians
  - D) Neither technician
  
- 7) Technician A says that most vehicles have independent front suspensions. Technician B says that no vehicle has an independent rear suspension. Which technician is correct? 7) \_\_\_\_\_
  - A) Technician A only
  - B) Technician B only
  - C) Both technicians
  - D) Neither technician

- 8) Which of the following linkage types may be used with a rack and pinion design? 8) \_\_\_\_\_
- A) Parallelogram
  - B) Tie rods
  - C) Haltenberger
  - D) None of these is correct
- 9) Which part in the steering column allows for changes in the angle between the upper and lower shafts? 9) \_\_\_\_\_
- A) Flexible coupling
  - B) Column cover
  - C) Universal joint
  - D) Collapsible section
- 10) Which of the following is NOT true of a MacPherson strut? 10) \_\_\_\_\_
- A) They are used only on the front of a vehicle
  - B) The strut assembly controls spring oscillation
  - C) MacPherson struts attach to the steering knuckle
  - D) MacPherson strut suspension systems may include an upper bearing

## Answer Key

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1) D

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2) A

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3) C

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4) D

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5) C

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6) A

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7) A

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8) B

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9) C

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10) A

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