

## Battery Electric Bus (BEB) Session #1: BEB Familiarization

### Test

Name: \_\_\_\_\_

Job Title: \_\_\_\_\_

Date: \_\_\_\_\_

Circle the correct answer for each question

- 1) The most common voltages in a BEB range from:
  - a. 50-200 volts
  - b. 200-300 volts
  - c. 400-800 volts
  - d. 900-1000 volts
  
- 2) The acronym ESS stands for:
  - a. Electric Standby System
  - b. Energy Storage System
  - c. Electronic Storage Station
  - d. Electromagnetic Storage System
  
- 3) BEBs use various electronic controllers to:
  - a. Monitor and control high and low voltage power
  - b. Ensure safe operation of bus subsystems
  - c. All of the above
  - d. None of the above
  
- 4) A traction motor in a BEB:
  - a. Replaces the traditional diesel engine
  - b. Uses AC voltage to turn bus wheels
  - c. All of the above
  - d. None of the above
  
- 5) A DC-to-DC converter replaces the need for an alternator
  - a. True
  - b. False

- 6) What is the standard color for insulation or looming that covers high voltage cables?
- a. Orange
  - b. Yellow
  - c. Blue
  - d. Red
- 7) An Inverter in a BEB:
- a. Changes AC voltage to DC
  - b. Changes 12 volts DC to 24 volts DC
  - c. Reverses battery polarity
  - d. Changes DC voltage to AC
- 8) BEBs require a glycol based (liquid) cooling system.
- a. True
  - b. False
- 9) During regenerative braking in a BEB:
- a. The flow of energy is reversed
  - b. Deceleration is similar to a retarder
  - c. All of the above
  - d. None of the above
- 10) Because of electric propulsion, BEBs do not require preventive maintenance
- a. True
  - b. False
- 11) Air filter replacements are not required for BEBs
- a. True
  - b. False
- 12) Because all diagnostic functions are built into BEBs, the need for laptop computers and OEM specific software programs is eliminated.
- a. True
  - b. False
- 13) SAE J1939 refers to:
- a. A process to size electric motors to batteries
  - b. Establish electric power steering requirements
  - c. Data communication protocols
  - d. AC-DC inverters

14) HVIL is an acronym for:

- a. High Voltage Interlock Loop
- b. High Voltage Integrated Logistics
- c. High Voltage Internal Lock
- d. High Voltage Inverter Logic

15) A purpose of the HVIL is to isolate high voltage to the batteries when an open in a circuit is detected.

- a. True
- b. False

BEB Course #1 Link:

[https://www.transittraining.net/images/uploads/full\\_documents/BEB\\_Session\\_1\\_Slides\\_and\\_Notes.pdf](https://www.transittraining.net/images/uploads/full_documents/BEB_Session_1_Slides_and_Notes.pdf)