

NAME: _____

DATE: _____

Choose the best answer. Each question has one best answer.

Part A Quiz 3A:1-5

3A:1) What is the proper 3-light tester sequence for a properly wired receptacle?

- ☐ A) Red / Red / Amber
- ☐ B) Amber / Off / Red
- ☐ C) Amber / Amber / Off
- ☐ D) Off / Amber / Off

3A:2) Can you use a 15-amp 3-light tester on a 30-amp RV outlet?

- ☐ A) No: There's too much current
- ☐ B) No: There's too much voltage
- ☐ C) Yes: Using a 15 to 30-amp adapter
- ☐ D) Yes: Using a 15 to 20-amp adapter

3A:3) What does the GFCI button on a 3-light tester do?

- ☐ A) Stops the tester from tripping the GFCI
- ☐ B) Make the tester trip the GFCI to check it
- ☐ C) Resets the GFCI automatic self-test function
- ☐ D) None of the above

3A:4) How does a 3-light tester react to a 120-volt external hot-ground

- ☐ A) Shows open ground light pattern
- ☐ B) Shows open neutral light pattern
- ☐ C) Shows reverse polarity light pattern
- ☐ D) A and C
- ☐ E) None of the above

3A:5) What causes a reflected hot-skin voltage?

- ☐ A) An ungrounded campground pedestal
- ☐ B) Several pedestals grounded together but disconnected from the main service ground
- ☐ C) At least one RV with a fault or leakage current
- ☐ D) It's a ghost voltage and not dangerous
- ☐ E) B & C
- ☐ F) A & D

Part B Quiz 3B:1-5

3B:1) What does a NCVT check for?

- ☐ A) AC voltage difference between the tip of the pen and the earth
- ☐ B) DC voltage difference between the tip of the pen and the earth
- ☐ C) AC or DC charges over 90 volts
- ☐ D) Current flow in the conductor

3B:2) What's the most useful voltage range for an NCVT used on an RV?

- ☐ A) 50 to 900 volts
- ☐ B) 100 to 1,000 volts
- ☐ C) A dual-range 12 to 1,000 and 100 to 1,000 volts
- ☐ D) 240 to 2,400 volts

3B:3) Is an NCVT the final test for a hot-skin voltage

- ☐ A) Yes: There's no other test needed
- ☐ B) No: Any NCVT showing a hot-skin voltage should be confirmed with a voltmeter
- ☐ C) No: You should use a Ground Loop Impedance Tester to confirm hot-skin voltage
- ☐ D) No: You should do a wet finger test to confirm hot-skin voltage

3B:4) Is a hot-skin voltage dangerous?

- ☐ A) No: These are ghost voltages which can only give you a tingle
- ☐ B) No: Most hot-skin shocks are under 1mA and not dangerous
- ☐ C) Yes: Even a low-current hot-skin voltage can turn deadly at any time
- ☐ D) Yes: As little as 40-volts AC can cause electrocution
- ☐ E) C and D

3B:5) What is an RPBG?

- ☐ A) Reverse Hot-Neutral Polarity plus a Ground-Neutral Bootleg
- ☐ B) The Neutral and Ground contacts are at 120-volts above earth ground
- ☐ C) It can't be detected with a 3-light tester or traditional voltmeter tests
- ☐ D) A Non-Contact Voltage Tester is the quickest test
- ☐ E) All of the above

Part C Quiz 3C:1-5

3C:1) How do you select a torque screwdriver for RV electrical systems?

- ☐ A) You need one rated for 10 to 70 in-lbs.
- ☐ B) You need one rated for 10 to 70 ft-lbs.
- ☐ C) You need one with a digital readout
- ☐ D) It needs to be insulated to protect you from shock

3C:2) Where do you find the torque values for circuit breakers?

- ☐ A) On the side of the breaker
- ☐ B) A 20-amp breaker needs 20 in-lbs., a 30-amp breaker needs 30 in-lbs. and a 50- amp breaker needs 50 in-lbs. of torque
- ☐ C) Breaker manufacturers publish recommended torque tables
- ☐ D) All circuit breakers need 50 in-lbs. of torque

3C:3) Where do you find the torque values for Automatic Transfer Switches?

- ☐ A) Inside of the top cover
- ☐ B) Outside of the top cover
- ☐ C) ATS manufacturers publish recommended torque tables
- ☐ D) All ATS connections need 50 in-lbs. of torque
- ☐ E) A & C
- ☐ F) B & D

3C:4) What are the visible signs of a loose terminating screw?

- ☐ A) Discolored insulation
- ☐ B) Discolored copper conductors
- ☐ C) Arcing when the wire is moved
- ☐ D) Infrared camera shows overheating
- ☐ E) All of the above

3C:5) Why do neutral connections seem to burn up more?

- ☐ A) A pedestal mis-wired with jumpered Hot-1 and Hot-2 contacts has additive neutral currents
- ☐ B) White conductors can't carry as much current as the other colors
- ☐ C) That's wrong, the ground wires burn up more than the other colors
- ☐ D) Triplen Harmonics cause the neutral screws to loosen up

Part D Quiz 3D:1-5

3D:1) What connections in an RV should be maintained with contact cleaner?

- ☐ A) All shore power cords and inlet connectors
- ☐ B) 7-way trailer connectors
- ☐ C) All circuit breaker terminating screws
- ☐ D) Solar panel connections
- ☐ E) A & B
- ☐ F) All of the above

3D:2) Why do oxidized or corroded brass contacts overheat?

- ☐ A) There's decreased resistance which causes overheating
- ☐ B) There's increased resistance which causes overheating
- ☐ C) There's a chemical reaction which causes overheating
- ☐ D) Increased resistance can cause voltage drop that can increase current draw
- ☐ E) B & D
- ☐ F) A & C

3D:3) What is the reason for following up contact cleaner with Silicone Spray?

- ☐ A) Silicone creates a barrier to help prevent future oxidation
- ☐ B) Silicone makes it easier to insert and remove the plugs
- ☐ C) Silicone lubricant isn't needed if you use DeoxIT D5 spray
- ☐ D) All of the above

3D:4) What contact sprays are acceptable?

- ☐ A) Any brand will work
- ☐ B) CRC Contact Cleaner plus Silicone spray works well
- ☐ C) WD-40 is a great contact cleaner
- ☐ D) DeoxIT is best but expensive
- ☐ E) B and D

3D:5) Is Dielectric grease a good idea?

- ☐ A) Most connections don't require it
- ☐ B) Connections that are exposed to the elements should use it
- ☐ C) It's an insulator and should never be used on electrical connections
- ☐ D) A and B