



ASEEN Post Workshop Exam

Thank you for having attended the ASEEN workshop. Please complete the following exam to evaluate your knowledge on matters relating to renewable energy.

Name: _____

1. At depth's relating to most geothermal applications, Earth's temperature is approximately:
 - a. 17 degrees F
 - b. 30 degrees F
 - c. 70 degrees F
 - d. 100 degrees F
 - e. 10 degrees F
2. Geothermal systems are:
 - a. Environmentally clean
 - b. Energy efficient
 - c. Cost effective space conditioning systems
 - d. All of the above
3. Which medium is the better for cooling, air or water?
 - a. Air
 - b. Water
4. Geothermal loops are made of:
 - a. Copper
 - b. High density polyethylene (HDPE)
 - c. Silver
 - d. Ceramic
 - e. Polyvinyl Chloride (PVC)
5. The operational savings from GeoExchange HVAC systems are:
 - a. 10% for cooling 60% for heating
 - b. 15% for cooling 30% for heating
 - c. 70% for cooling 30% for heating
 - d. 30% for cooling 70% for heating
 - e. 60% for cooling 10% for heating
6. Which Photovoltaic material is currently more efficient at absorbing solar radiation?
 - a. Polycrystalline silicon
 - b. Thin film
7. What does an inverter do?

- a. Converts AC current to DC current
 - b. Amplifies DC current to AC current
 - c. Converts DC current to AC current
 - d. Amplifies AC current to DC current
8. kW.h (kilo watt hour) is a unit of:
- a. Power
 - b. Energy
 - c. Voltage
 - d. Current
9. Electricity production from a solar panel is highest in:
- a. Cold weather
 - b. Warm weather
 - c. Weather does not matter.
10. In a solar panel set up, what is the role of the charge controller (select the best answer)?
- a. It supplies a battery with current
 - b. It allows current to be drawn from the battery
 - c. It ensures the battery is neither over charged nor fully drained
 - d. It ensures the battery is not over charged
11. M85 biofuel:
- a. Contains ethanol and derives from food
 - b. Contains methanol and derives from food
 - c. Contains ethanol and derives from manure
 - d. Contains methanol and derives from manure
12. Methanol and ethanol are rich in:
- a. Bromine
 - b. Calcium
 - c. Oxygen
 - d. Helium
13. The engine running on a biodiesel was first demonstrated in:
- a. 1913
 - b. 1897
 - c. 1978
 - d. 1954
14. Which is true?
- a. Biodiesel have higher cetane levels than conventional diesel
 - b. Biodiesel have lower cetane levels than conventional diesel
15. If an energy conversion process requires three steps, each performed with an efficiency of 10%, 50%, and 20%, what is the net efficiency of the conversion process?
- a. 10%
 - b. 12%
 - c. 80%
 - d. 1%