



CAMI Education (Pty) Ltd
Reg. No. 1996/017609/07
CAMI House
Fir Drive, Northcliff
P.O. Box 1260
CRESTA, 2118
Tel: +27 (11) 476-2020
Fax : 086 601 4400
web: www.camiweb.com
e-mail: info@camiweb.com

CAMI EDUCATION

NATURAL SCIENCES

GRADE 7 REVISION MEMORANDUM

SECTION: ENERGY SOURCES

1. Give a definition for energy. (2)
 - The property of an object to do work
2. Name four types of renewable energy used in South Africa. (4)
 - Wind energy
 - Solar energy
 - Biomass energy
 - Water energy
3. Biomass is a renewable energy source.
- 3.1 What is biomass? (1)
 - Plant material
- 3.2 Name two disadvantages of biomass, as an alternative energy source, on the environment and nature. (2)
 - Causes pollution.
 - It is expensive to produce biomass
 - Chopping down of trees has a negative effect on the oxygen supply in the world.
4. Name two examples of fossil fuels. (2)
 - Coal
 - Oil
 - Natural gas



5. Name five forms of energy. (5)

- Chemical energy
- Sound energy
- Nuclear energy
- Electrical energy
- Heat energy

6. Give two advantages of wind energy. (2)

- Doesn't cause pollution.
- Will never be depleted.

7. Describe, in short, the process where nuclear energy is used to produce electricity. (4)

- Splitting atoms produces a lot of heat energy.
- The heat is then used to turn water into steam.
- The steam is used to turn turbines.
- The turbines are then used to turn the generator that produces electricity.

8. It is alleged that a burning light bulb wastes up to 95% of its energy. Explain how this is possible. (2)

- Light bulbs provide light through a filament that becomes very hot.
- If the light is burning, the heat that is formed, is given off to the atmosphere and is lost.

9. Solar cells are used as an energy source to provide small amounts of electricity.

9.1 Solar cells are made from silicon. What is silicon made from? (1)

- Sand

9.2 Name three advantages of solar cells. (3)

- Doesn't have any moving parts
- Little maintenance
- It is clean
- Quiet
- Safe

9.3 Name two apparatuses that uses solar cells. (2)

- Watches
- Calculators



10.1 Describe the working of a hydro electrical power station. (4)

- Dams are built in catchment areas.
- Water falls through pipes to the water turbines.
- The falling water is then used to turn the turbines.
- The turbines then operate the generator that generates electricity.

10.2 Complete the following to show the different energy conversions that take place at a hydro electrical power plant.

Kinetic energy → Mechanical energy → Electrical energy (2)

11. The world is in an energy crisis. Name five ways in which you can contribute to solving this problem by saving energy in and around your house. (5)

- Switch off lights that are burning unnecessarily
- Switch off electrical appliances such as TV's and radios if not used
- Don't fill the kettle if you only need a little bit of boiling water.
- Regulate the geyser's thermostat
- Don't fill your bath with hot water and then use cold water to cool it down, rather use less hot water.

12. How is biogas produced? (3)

- Allow manure and plant material to decay without the presence of oxygen.
- Bacteria breaks down the decaying material to form methane gas and carbon dioxide.
- The methane gas is flammable and is used as fuel.

13. What does biogas consist of? (2)

- Carbon dioxide
- Methane

14. Give two advantages of biogas. (2)

- Apparatus for production is cheap.
- Apparatus is easy to assemble.
- It is a cheap method to produce fuel.