

University of Bejaia
Department of Technology
Second year Technical Science
2009/2010

First term exam

Electricity

Electricity, one of the basic forms of energy. Electricity is associated with electric charge, a property of certain elementary particles such as electrons and protons, two of the basic particles that make up the atoms of all ordinary matter. Electric charges can be stationary, as in static Electricity, or moving, as in an electric current.

Electrical activity takes place constantly every where in the universe. Electrical forces hold molecules together. The nervous system of animals work by means of weak electric signals transmitted between neurons (nerve cells).Electricity is generated, transmitted, and converted into heat, light, motion, and other forms of energy through natural processes, as well as by devices built by people.

Electricity has an extremely versatile form of energy. It can be generated in many ways and from many different sources .It can be sent almost instantaneously over long distances. Electricity can also be converted efficiently into other forms of energy, and it can be stored because of this versatility, electricity plays a part in nearly every aspect of modern technology. Electricity provides light, heat, and mechanical power. It makes telephones, computers, televisions, and countless other necessities and luxuries possible.

I) - Reading comprehension:

Answer the following questions according to the text:

A) - Say whether the following statements are : True/ False /Not mentioned (2 pts)

- 1) - Electric charges must be stationary, as in static Electricity..... *False*
- 2) - Electric charges can be moving, as in static Electricity, or stationary, as in an electric current..... *False*
- 3) - Variable resistor varies the current in a circuit..... *Not mentioned*
- 4) - A difference in potential is required before current can flow in a circuit. *Not mentioned*

B)- Answer the following questions: (3pts)

1) What are the different forms of Electric current?

Electric current can be stationary or moving

2) -How does the nervous system of animals function?

The nervous system of animals work by means of electric signals transmitted between neurons.

3) -What are the different advantages of Electricity?

Electricity provides light, heat, and mechanical power. It makes telephones, computers, televisions, and countless other necessities and luxuries possible.

II) - Lexis:

A)-Find in the text words that are similar in meaning to the following: (1,5 pts)

- Related: *associated*
- Continuously: *constantly*
- Immediately: *instantaneously*

B) - Find in the text words that are opposite in meaning to the following: (1,5 pts)

- Strong: *weak*
- Unrelated: *elementary*
- Static: *moving*

III- Syntax:

A)-Give the correct form to the verbs between brackets: (2 pts)

1- Water *boils* (boil) at 100degrees Celsius.

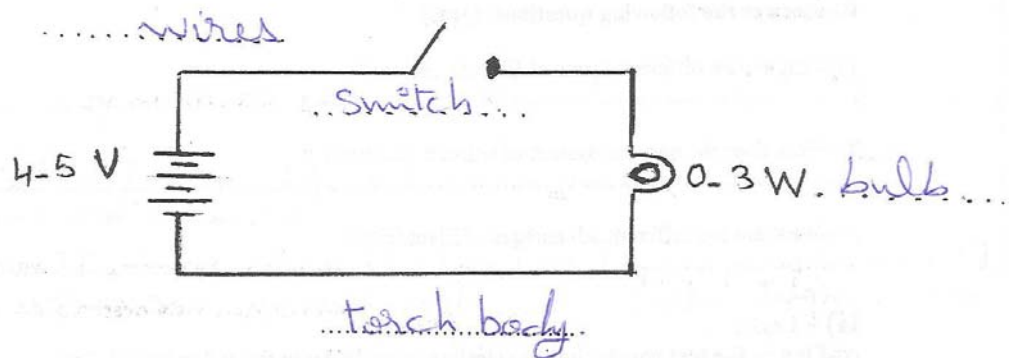
2- How many cigarettes *do you smoke* (you/ smoke) a day?

- 3- Where *do you come*(you /come) from?.
- 4- Every thing is going well, we *have not had*(not / have) any problems up till now.

B) - Fill in **been** or **gone**: (1,5 pts)

- 1) - Tom is back from his vacation. He has *been* to Italy.
- 3) - Hello! I've just *been* to the store. Look all the things I've bought.
- 2) - Jane isn't here at the moment. She's *gone* to the store.

IV- Give the appropriate title to following figure and specify the names of its different parts:(2pts)



V)-Translate into French the following terms:

- | | |
|--|---|
| - Heat (0,5pt): <i>chaleur</i> | - Provide(1pt) : <i>fournir</i> |
| - Motion (1pt): <i>mouvement</i> | - Device(0,5pt): <i>appareil / instrument</i> |
| - Nerve cells (1pt): <i>neurone / cellule nerveuse</i> | - Fuse (1pt) : <i>particule</i> |
| - Particles (1pt): <i>fusible</i> | - Bulb (0,5pt): <i>lampe</i> |

All the best,
your teachers.

