

الاسم واللقب: الفوج:

I- Answer the following questions:

- 1- A material in which electrons are able to move easily?
Conductors.
- 2- What is the maximum number of valence electrons in an atom?
The maximum number of valence electrons in an atom is 8 (Eight) electrons.
- 3- How the valence electrons share the energy applied to them?
The valence electrons share the energy applied to them equally.
- 4- How many valence electrons have the best electrical conductors?
Only one
- 5- Name two semiconductors, and two conductors?
Two semiconductors = Si, Ge ... Two conductors = Copper, Silver.
- 6- What is a «valence electron»?
Electrons of the outer shell
- 7- What is the difference between the valence shell and the outer shell?
No difference, are the same
- 8- What is an electric current?
The electric current is the flow of these free electrons in one direction.

II- Fill in each gap with one word:

has / copper / glass / increases / opposite / inside / metal / between

A semiconductor material **has** an electrical conductivity value falling **between** that of a conductor – such as **copper**, gold etc. – and an insulator, such as **glass** Their resistance decreases as their temperature **increases**, which is behavior **opposite** to that of a **metal**.

Semiconductor devices mounted **inside** many electronics appliances are important electronic components that support our everyday live.

III- Translate from English into Arabic:

- 1- Insulators are poor conductors of electricity
العوازل هي موصلات ضعيفة للكهرباء
- 2- A good conductor contains a large number of free electrons
يحتوي الموصل الجيد على عدد كبير من الإلكترونات الحرة
- 3- Metals are typically good conductors
عادة ما تكون المعادن موصلات جيدة
- 4- A positive ion is produced when a parent atom loses an electron
يتم إنتاج أيون موجب عندما تفقد الذرة الأصل إلكترونات