



COMPLEJO EDUCACIONAL SAN ALFONSO
FUNDACIÓN QUITALMAHUE
 Eyzaguirre 2879 Fono- 22-852 1092 Puente Alto
planificacionessanalfonso@gmail.com
www.colegiosanalfonso.cl



Guía n°7 Octubre – sistema mixto

Asignatura/Módulo	Inglés
Docente	Guillermo Órdenes
Nombre estudiante	
Curso	Tercero medio _____ ELECTRICIDAD
Fecha de entrega	31 de Octubre
OA	Oa3: Utilizar su conocimiento del inglés en la comprensión y producción de textos orales y escritos breves y claros, con el fin de construir una postura personal crítica en contextos relacionados con sus intereses e inquietudes.

I Item: Read the text and answer the questions. Lee el texto y responde.

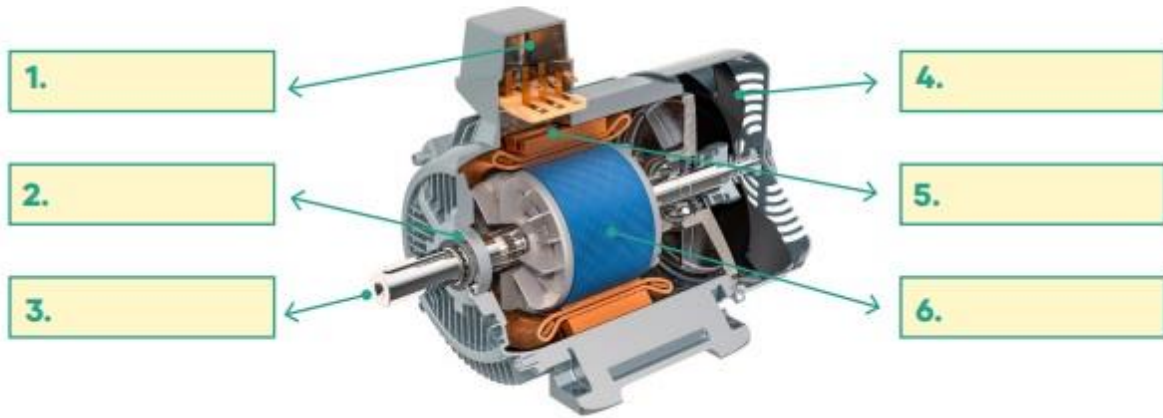
WHAT IS AN ELECTRIC MOTOR?

An electric motor is a device that serves to convert electrical energy into motion energy. Power tools, for example, contain electric motors. Electric motors utilize magnetic pull force in order to drive a shaft. When two magnets with the same poles are brought together, the two magnets move away. Conversely, if the magnetic poles are different then they will attract each other. This is the basic principle of electric motors. Simple motor parts and their function

- 1. Stator:** The stator is the stationary part of the motor’s electromagnetic circuit and usually consists of either windings or permanent magnets. The function of the stator is to generate a magnetic field around the rotor.
- 2. Rotor:** It’s the moving part in an electric motor, which turns the shaft to deliver the mechanical power. The rotor usually has conductors inside that carry currents, which interact with the magnetic field of the stator to generate the forces that turn the shaft.
- 3. Main shaft:** The main shaft (a.k.a drive shaft) is a metal component that extends as a place to attach other components, such as the rotor and the drive pulley. Generally, the main shaft is made of anti-rust aluminum. Besides, this component must also be stable at high rotation and temperature.
- 4. Brush:** The brush is an electrical contact that conducts current between stationary wires and moving parts. As the shaft goes around, the brush has contact with the rotor and transmits an electrical current to it.
- 5. Bearing:** The rotor is supported by bearings, which allow the rotor to turn on its axis. The bearings are in turn supported by the motor housing. The motor shaft extends through the bearings to the outside of the motor, where the load is applied.
- 6. Pulley Drive:** This component is located at the outer end of the main shaft. Its function is to transfer motor rotation to other components.
- 7. Commutator:** A commutator is a mechanism used to switch the input of most DC machines and certain AC machines. It consists of slip-ring segments insulated from each other and the shaft. The motor’s armature current is supplied through stationary brushes in contact with the revolving commutator, which causes required current reversal, and applies power to the machine in an optimal manner as the rotor rotates from pole to pole. In absence of such a current reversal, the motor would brake to a stop. In light of improved technologies in the electronic-controller, sensorless-control, induction motor, and permanent-magnet-motor fields, externally-commutated induction and permanent-magnet motors are displacing electromechanically-commutated motors.
- 8. Motor Housing:** This is used to protect all parts of the electric motor, as well as to protect the users of the motor

II Item: Look at the picture and label the electrical motor! Utiliza las palabras del recuadro para completar el dibujo.

cooling fan / rotor / bearings / main shaft / stator / terminal box



III Item: Match the parts of an electric motor to their functions. Une las partes de un motor eléctrico con sus funciones, utiliza los números.

A		B	
1	Stator		It is the moving part of the motor, which turns the shaft.
2	Brush		It transfers motor rotation to other components.
3	Pulley drive		It protects all parts of the electric motor.
4	Rotor	1	It generates a magnetic field around the rotor.
5	Motor housing		It transmits electrical current to the rotor.

IV Item: Answer the questions! Responde lo siguiente, de acuerdo al texto.

1. What happens if the stator is not working?

2. What happens if the rotor is not working?

3. What happens if the pulley drive is not working?

4. What happens if the motor housing is broken?
