Surname **Name** **Class** **Date**

ENGLISH CLASS TEST_LORENTZ FORCE

Activity 1. Match the words in column A with the definitions in column B.

A		B
1. Magnetic		a) Tools for pressing two or more parts together
2. Graphite		b) Insulated electrical conductors
3. Magnet		c) A mineral consisting of a form of carbon used in pencils
4. Balsa		d) Pertaining to magnetism or a magnet
5. Friction		e) Property of a physical system which has opposite charges or electric potentials
6. Electric current		f) Its wood is light and strong
7. Clamps		g) The flow (movement)of electric charge per unit time
8. Cables		h) A piece of material which produces a magnetic field outside itself
9. Aluminium foil		i) The force of two surfaces in contact
10. Polarity		j) Aluminium in the form of a thin sheet

Activity 2. Say if the following statements are TRUE or FALSE.

1. In the rotating blade experiment the magnets do not need to be covered with metal. ___
2. In the rotating blade experiment the aluminium foil should be folded once or twice if it is too thin. ___
3. In the rotating blade experiment the DC power supply from a transformer is as suitable as a battery to control the device. ___
4. The aluminium blade will start rotating as soon as the electrical wires are connected to the power supply. ___
5. In the undulating aluminium strip experiment the horseshoe magnets are put on a table without taking into consideration their polarity. ___
6. The aluminium strip is positioned between the poles of the horseshoe magnets. ___
7. The aluminium strip feels a force parallel to the current and the direction of the magnetic field. ___
8. The distance between the horseshoe magnets influences the shape of the wave. ___

Activity 3. Now correct the false statements.

_____
_____
_____
_____
_____
_____
_____
_____
_____

Activity 4. Complete the following short text with the words in the box.

applies – field – moves – wire – charge – is called – perpendicular

When an electric charge _____ through a magnetic _____, there is a force on the charge, _____ to the direction of the _____ and perpendicular to the direction of the magnetic field. This force _____ the Lorentz Force. This also _____ to electric current in a _____. The direction of the force is demonstrated by the Right Hand Rule.

Activity 5. Answer the following questions.

1. What causes the blade to rotate in the rotating blade experiment?
2. Why does the top magnet surface have to be clean and smooth?
3. What does the Lorentz Force cause in a flexible aluminium strip?
4. In the aluminium strip experiment, what does the number of "hills" depend on?
5. What is the aluminium strip perpendicular to?