**Revision for P6 – Electricity for gadgets**

Resistance

1. What is the relationship between voltage, current and resistance?
2. What affects the resistance in a piece of wire?
3. What are the circuit symbols for a variable resistor, LDR and thermistor?
4. What are ohmic and non-ohmic components?
5. Describe the affect of light on an LDR.
6. Describe the affect of heat on a thermistor.

Potential dividers

1. What is the purpose of a potential divider circuit?
2. Draw a circuit diagram of a potential divider circuit.
3. Write the equation for the output voltage of a potential divider circuit.

Motors/generators

1. How do we induce electric current in a wire?
2. How can we increase the size of an induced current?
3. Explain the right hand grip rule.
4. Explain Fleming’s left hand rule.
5. Why does a motor need a split ring commutator?
6. What is the difference in structure between an AC and a DC generator?

Transformers

1. What is a step up and step down transformer?
2. State the transformer equation.
3. How does the use of transformers in the National grid reduce the loss of power?
4. What is an isolating transformer?

Diodes

1. What does a diode do?
2. How does it work?
3. What is half wave rectification?
4. How does a bridge circuit cause full wave rectification?
5. What is a capacitor?
6. How is a capacitor used to “smooth” a circuit output?

Relays

1. How does a relay act as a switch?
2. Where are relays used?