9 SCIENCE 2015

PHYSICS TEST TWO

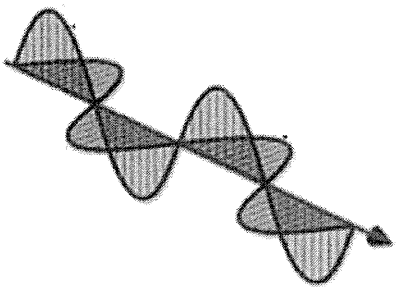
Name: ANSWER KEY **Teacher:** _____ **Mark:** /53

Percentage: %

SECTION A: **MULTIPLE CHOICE** **(15 marks)**

Select the most correct answer for each question below.

1. Select the name given to the diagram on the right.



(a) Magnetic wave.
(b) Electromagnetic wave.
(c) Magnotronic wave.
(d) Electric wave.

(1)

2. Choose the correct definition for 'wave motion'.

(a) The movement of one wave past a point.
(b) The transfer of energy without transferring matter.
(c) The transfer of energy that transfers matter.
(d) The movement of waves in matter.

(1)

3. Electromagnetic radiation used in communication are:

(a) Radio waves.
(b) Microwaves.
(c) Infrared radiation.
(d) Both (a) and (b).

(1)

4. Choose the correct definition for 'electromagnetic radiation'.

(a) A range of electromagnetic waves travelling at the speed of light.
(b) A range of magnetic waves travelling at the speed of sound.
(c) Two interconnected fields moving as transverse waves.
(d) A range of electromagnetic waves travelling at the speed of sound.

(1)

5. Choose the correct definition for 'current'.

(a) Movement of electricity.
(b) The flow of charge.
(c) Movement of protons.
(d) The build-up of electric charge.

(1)

ANSWER KEY

6. The machine on the right produces:

(a) Infrared radiation.
(b) Gamma rays.
(c) Ultraviolet light.
(d) X-rays.

7. Choose the correct definition for 'X-rays'.

(a) Electromagnetic radiation used in communication.
(b) Electromagnetic radiation emitted by radioactive materials.
(c) Electromagnetic radiation detected by our skin as heat.
(d) High energy electromagnetic radiation that can penetrate materials.

8. Choose the correct definition for 'visible light'.

(a) Electromagnetic radiation detected by our eyes.
(b) Electromagnetic radiation detected by our skin.
(c) Electromagnetic radiation used in communication.
(d) Electromagnetic radiation emitted by radioactive materials.

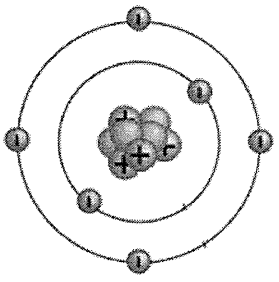
9. Choose the correct definition for 'components'.

(a) The parts of a circuit.
(b) The parts of a wave.
(c) The parts of an atom.
(d) The parts of an energy circuit.

10. If something with a build-up of charge comes into close contact with another object, what may happen to the electrons?

(a) The electrons may jump across a gap from the negatively charged surface back to the positively charged surface.
(b) The electrons may join together due to attraction between them.
(c) The electrons may jump across a gap from the positively charged surface back to the negatively charged surface.
(d) The electrons may build up more energy.

11. Choose the correct statement for the atom on the right.



(a) The atom is an ion.
(b) The atom is neutral.
(c) The atom has a negative charge.
(d) Both (a) and (c).

12. The diagram on the right represents:

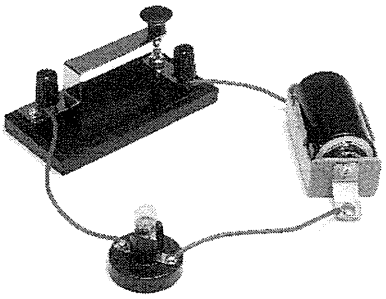
(a) A closed switch.
(b) A voltmeter.
(c) A resistor.
(d) A battery.

(1)

13. The image on the right is an example of:

(a) An electric circuit.
(b) An electric source.
(c) A circuit diagram.
(d) A path of protons.

(1)



14. The damaging rays that are emitted in a nuclear explosion are:

(a) Ultraviolet light rays.
(b) Gamma rays.
(c) X-rays.
(d) Infrared radiation.

(1)

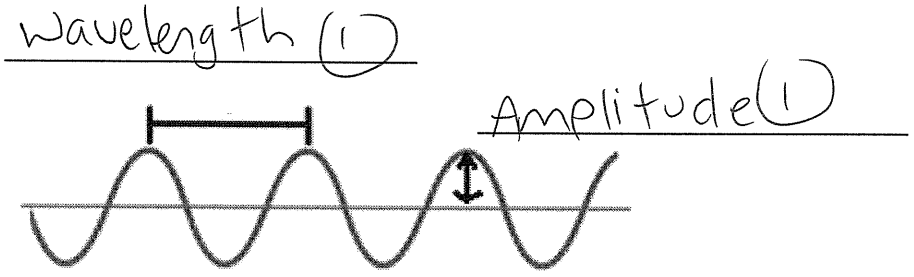
15. The object on the right uses:

(a) Ultraviolet light.
(b) Radio waves.
(c) Infrared radiation.
(d) Gamma rays.

(1)

SECTION B: **SHORT ANSWER** **(38 marks)**

1. Label the diagram of the wave below. (2 marks)



2. Write a definition for 'microwaves'. (1 mark)

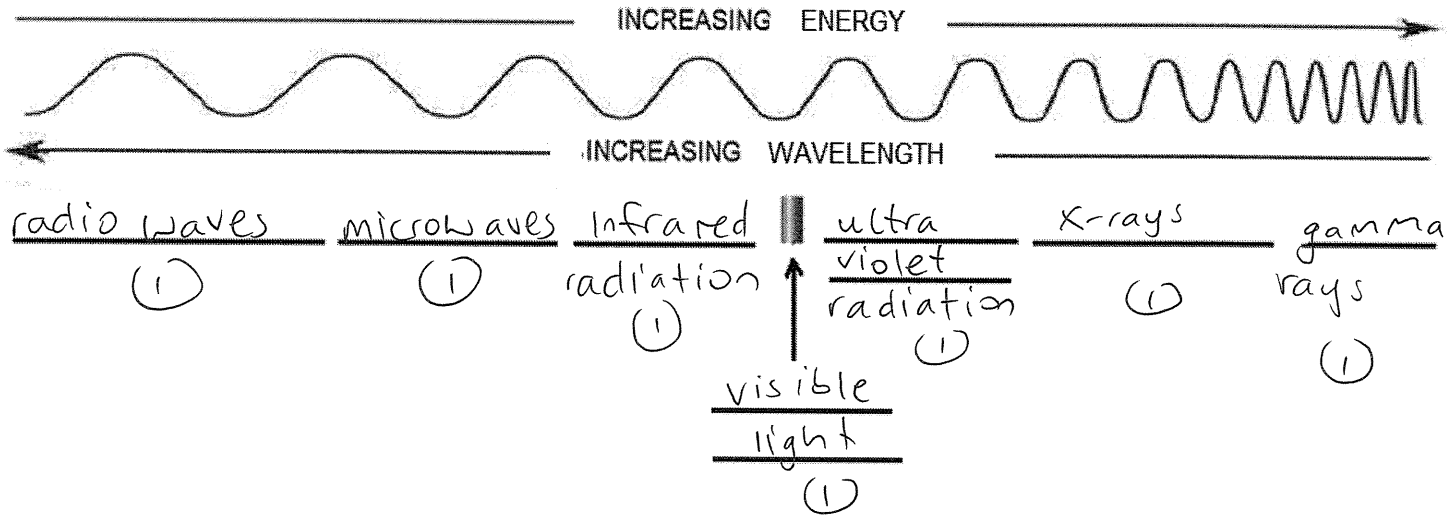
Electromagnetic radiation used in communication and cooking.

2a. What is the diagram below called? (1 mark)

The electromagnetic spectrum

b. Label the diagram below using the terms below. (7 marks)

Microwaves, x-rays, gamma rays, infrared radiation, radio waves, visible light, ultra violet radiation.



3. List three forms of energy released when a spark jumps across a gap. (3 marks)

Heat, light, sound, kinetic energy (1 mark each)

4. List three things that an electric circuit needs. (3 marks)

Energy source (1)

Energy user (1)

Conductors / wires to connect everything together (1)

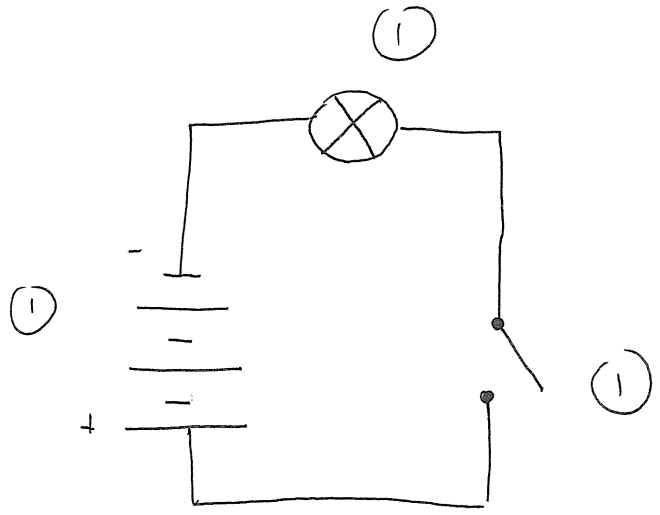
5. Write a definition for 'electric circuit'. (1 mark)

The path that energy flows along.

6. Write a definition for 'static electricity'. (1 mark)

The build-up of electric charge on a surface

7. Draw a circuit diagram that has an open switch, light globe and battery. (3 marks)



8. Fill in the missing words below. (4 marks)

When a plastic rod is rubbed onto a piece of fur, (1) electrons move off the rod and this gives the rod a positive (1) charge.

The fur now has more electrons (1) and therefore has a negative (1) charge.

9. List two places where electromagnetic waves are generated (created) naturally. (2 marks)

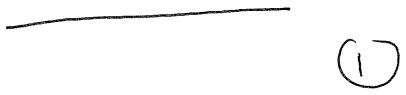
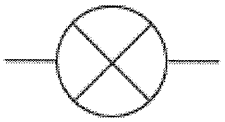
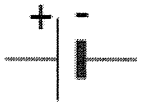
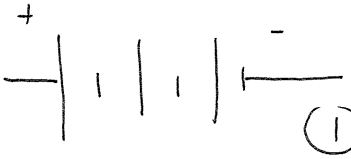
upper atmosphere (1)

stars (1)

10. State an example of an energy source that could be used in an electric circuit. (1 mark)

Battery or generator

11. Fill in the table below. (9 marks)

Component	Diagram
Connecting wire	 (1)
Ammeter (1)	
Switch (open)	 (1)
Light globe (1)	
Switch (closed) (1)	
Voltmeter	 (1)
Cell (1)	
Battery	 (1)
Resistor	 (1)