Practice Question Set For GCSE
Subject : Physics
Paper-2 Topic: GCSE Triple Science_Waves (SDQ)

Name of the Student:_____
Max. Marks : 13 Marks **Time : 13 Minutes**

Q1.

After a person is injured a doctor will sometimes ask for a photograph to be taken of the patient's bone structure, e.g. in the case of a suspected broken arm.

(i) Which type of electromagnetic radiation would be used to take the photograph?

_____

(1)

(ii) Describe the properties of this radiation which enable it to be used to photograph bone structure.

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(2)
(Total 3 marks)

Q2.

(a) When an electric kettle is switched on it will take a few minutes to boil the water. Once switched off it will gradually cool down.

(i) When the kettle is switched on the water heats. Explain how all of the water is heated.

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_____

(ii) The kettle is now switched off and begins to cool.

(1) Describe how heat energy is transferred **through** the walls of the kettle.

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(2) Describe how the heat energy is transferred **from** the walls of the kettle.

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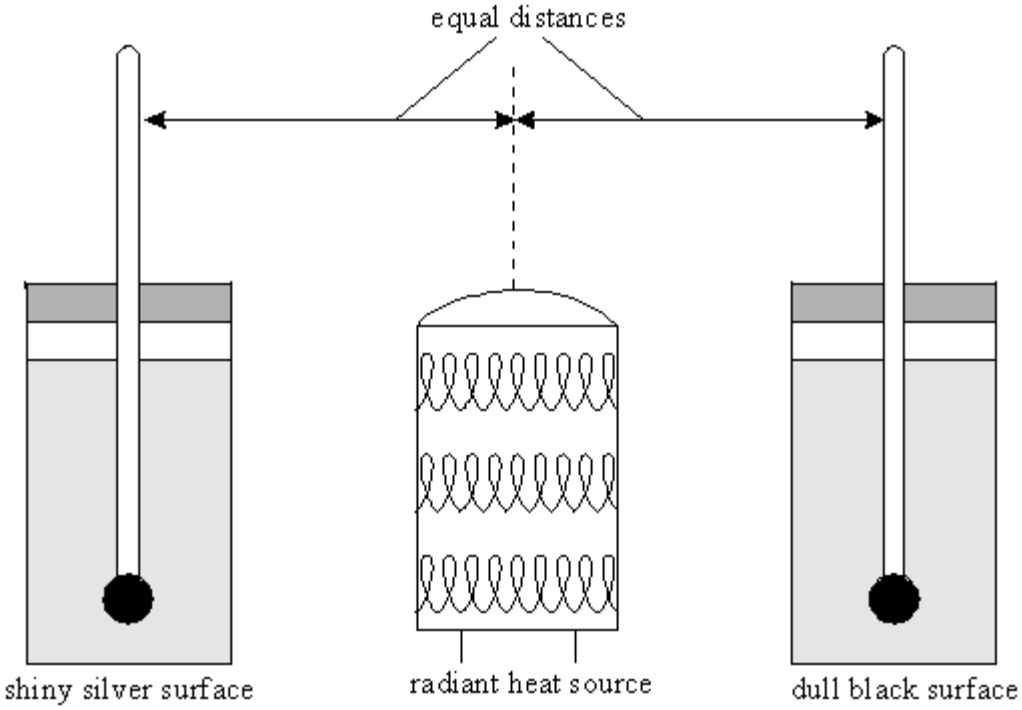
(iii) Describe how heat losses from the surface of a metal kettle may be kept small.

(4)

(b) A shiny metal can and a dull black can are filled with the same amounts of cold water. A radiant heater is placed exactly half way between the cans as shown in the diagram below.



Two thermometers are used to measure the temperature of the water in each can every minute.

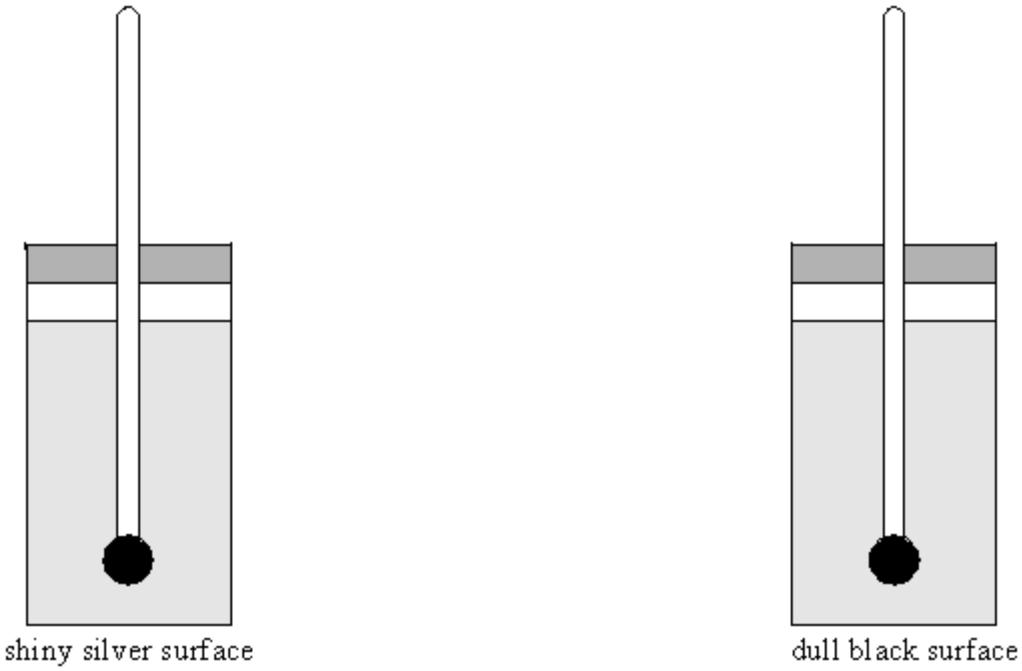
(i) Suggest how the temperature of the water in the dull can would be different from the temperature of the water in the shiny can after ten minutes.

(ii) Explain your answer to part (i).

(3)

(c) The radiant heater was removed and both the cans were filled with the same amount of boiling

water, as shown in the diagram below.



The temperature was recorded every minute for ten minutes.

(i) Suggest how the temperature of the water in the dull can would be different from the temperature of the water in the shiny can after ten minutes.

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_____

(ii) Explain your answer to part (i).

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(3)

(Total 10 marks)