Practice Question Set For GCSE
Subject : Physics
Paper-2 Topic : 10_Electricity

Merit Minds
www.merit-minds.com
Exam Preparation and Free Resources

Name of the Student:_____
Max. Marks : 20 Marks **Time : 20 Minutes**

Q1.

Figure 1 shows a circuit containing a battery and **four** other components.

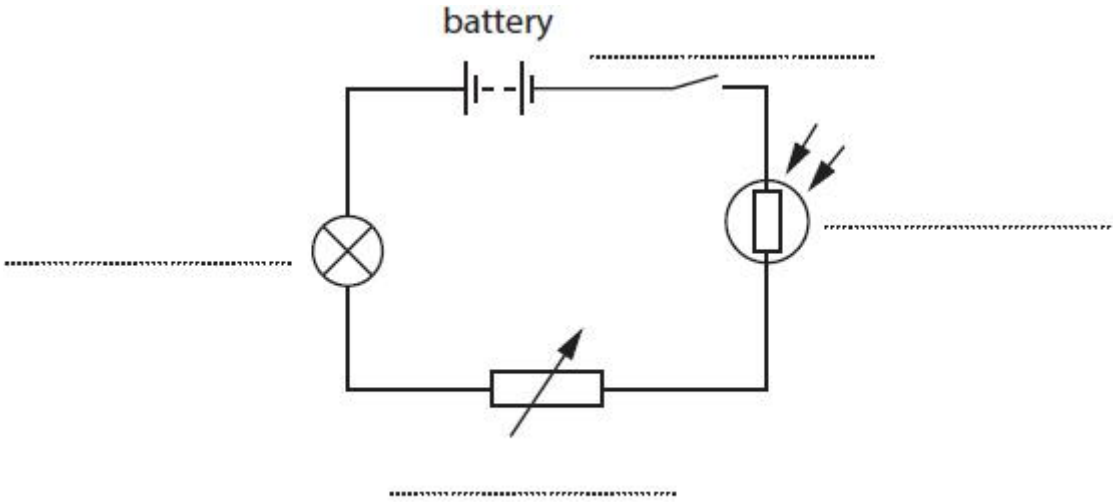


Figure 1

Label the **four** components in Figure 1, using words from the box.

ammeter	lamp	LDR
switch	thermistor	variable resistor

(4)

(Total for question = 4 marks)

Downloaded from www.merit-minds.com

Q2.

Answer the question with a cross in the box you think is correct ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

Figure 5 shows a charger for a car battery.

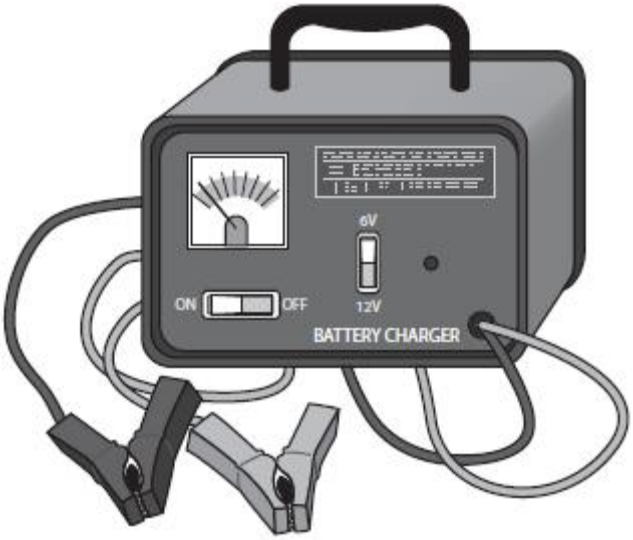


Figure 5

(i) The meter on the battery charger shows the current supplied to a battery.

The meter on the battery charger is

(1)

- ☒ **A** an ammeter
- ☒ **B** an ohmmeter
- ☒ **C** a voltmeter
- ☒ **D** a wattmeter

(ii) The battery charger supplies a steady current of 2.5 A to the battery.

Calculate the charge flowing to the battery in 8 minutes.
Use the equation

charge = current × time

(2)

charge = ... C

(Total for question = 3 marks)

Downloaded from www.merit-minds.com

Q3.

Answer the question with a cross in the box you think is correct ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

Figure 11 shows part of the UK National Grid system for the supply of electricity to homes.

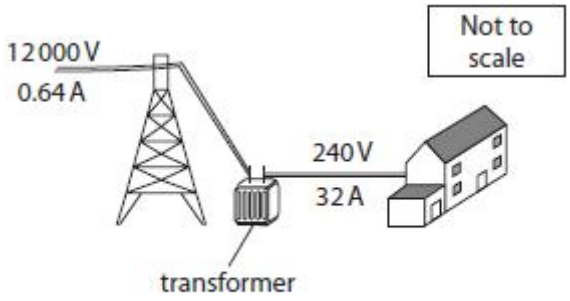


Figure 11

Electricity supplied to homes has a frequency of

(1)

- ☒ **A** 0.02 Hz
- ☒ **B** 20 Hz
- ☒ **C** 50 Hz
- ☒ **D** 500 Hz

(Total for question = 1 mark)

Downloaded from www.merit-minds.com

Q4.

Some questions must be answered with a cross in a box (☒). If you change your mind about an answer, put a line through the box (☒) and then mark your new answer with a cross (☒).

An electric water pump is powered by the 230 V mains supply.

Figure 12 shows the inside of the plug on the cable to the pump.

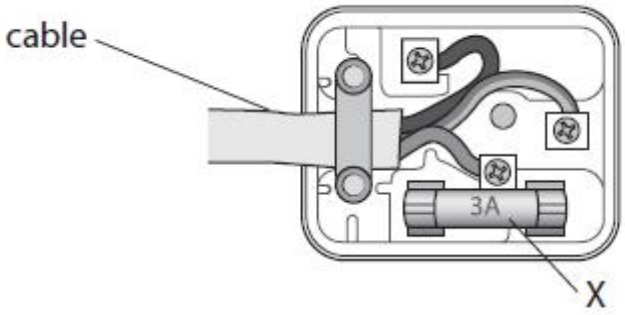


Figure 12

(i) One wire in the plug is the earth wire.

The other two wires are

(1)

- ☒ **A** live and negative
- ☒ **B** live and neutral
- ☒ **C** positive and negative
- ☒ **D** positive and neutral

(ii) Describe the purpose of the component labelled X.

(2)

.....

.....

.....

.....

(Total for question = 3 marks)

Downloaded from www.merit-minds.com

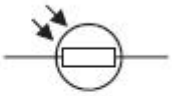
Q5.

Answer the question with a cross in the box you think is correct ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

Which of these symbols is used to represent a thermistor in an electrical circuit?

(1)

☐ **A** 

☐ **B** 

☐ **C** 

☐ **D** 

(Total for question = 1 mark)

Downloaded from www.merit-minds.com

Q6.

Answer the question with a cross in the box you think is correct ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

Figure 4 shows the current flowing into and out of point P in part of a circuit.

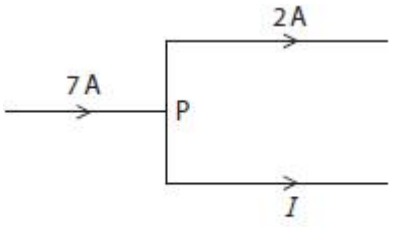


Figure 4

Which of these is the value of current *I*?

(1)

- ☒ **A** 2 A
- ☒ **B** 5 A
- ☒ **C** 7 A
- ☒ **D** 9 A

(Total for question = 1 mark)

Downloaded from www.merit-minds.com

Q7.

Figure 12 shows a graph of current against potential difference for an electrical component.

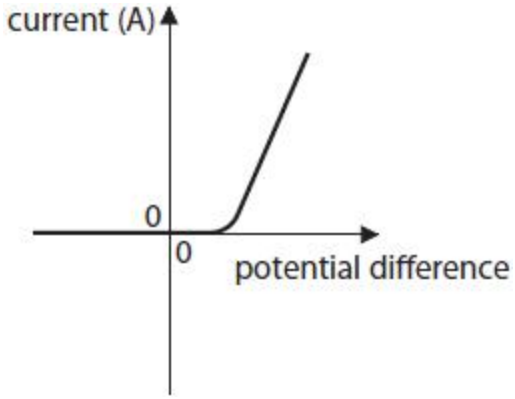


Figure 12

Which electrical component will show this variation of current with potential difference?

(1)

- ☒ **A** thermistor
- ☒ **B** low value resistor at constant temperature
- ☒ **C** high value resistor at constant temperature
- ☒ **D** diode

(Total for question = 1 mark)

Downloaded from www.merit-minds.com

Q8.

* The resistance of a thermistor changes with temperature.

Describe an experiment to investigate how the resistance of a thermistor changes with temperature.

You may draw a diagram to help with your answer.

(6)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(Total for question = 6 marks)

Downloaded from www.merit-minds.com