Practice Question Set For GCSE
Subject : Physics
Paper-1 Topic: GCSE Triple Science_Electricity (Standard Demand Questions)

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Name of the Student:_____
Max. Marks : 22 Marks **Time : 22 Minutes**

Q1.

There are many forms of energy. Some of these forms of energy can be "stored" ready to be used when the energy is needed. The chemical energy in fuels is one example of stored energy.

(a) Complete the following sentences by adding the missing words.

The chemical energy in fuels such as coal came originally from the _____ .

Energy from fuels can be used to _____ .

(2)

(b) An electric milk float has its batteries charged up overnight. Early in the morning the milkman sets off on his round. Describe the energy transfers which take place in the milk float as the milkman does his rounds.

_____

_____

_____

_____

_____

_____

(4)

(c) Give another example of energy other than fuels which can be classed as "stored" energy. Give a use of the "stored" energy.

Type of "stored" energy _____

Use _____

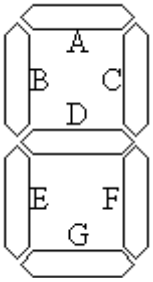
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(2)
(Total 8 marks)

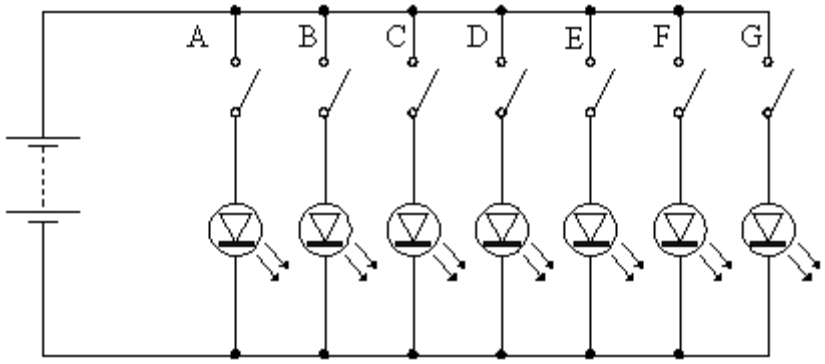
Q2.

Some electronic calculators use light emitting diodes (LEDs) to display numbers. Each number in a display consists of up to seven LEDs. The LEDs are arranged as shown in the diagram below. The different numbers are formed by switching different LEDs on at the same time. The LEDs are labelled A to G.

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A simplified circuit to provide power to the LEDs is shown below.



(a) Explain why each LED has its own switch.

_____

_____

(2)

(b) What number is displayed when all switches except E are closed?

_____

(1)

(c) Which switches would be open if the number 3 is to be displayed?

_____

(1)

(d) Which of the numbers 0 to 9 draws least current from the battery? Explain your answer.

Number _____

Explanation _____

_____

_____

(2)

(Total 6 marks)

Q3.

A pupil did an experiment following the instructions below.

1. Take a polythene rod (AB), hold it at its centre and rub both ends with a cloth.

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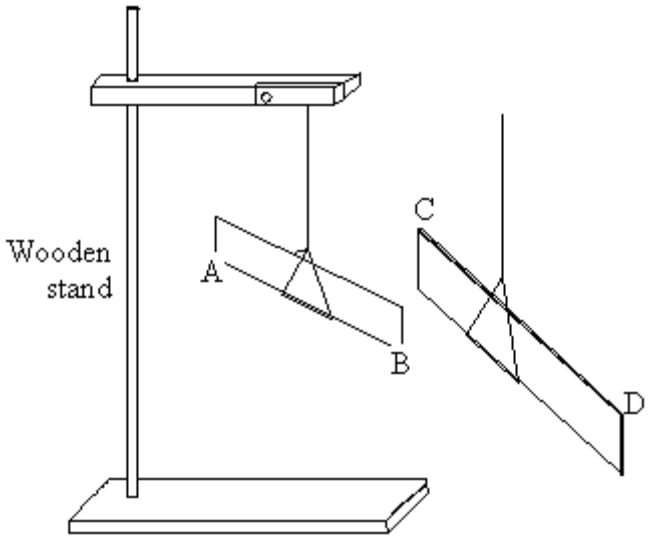
2. Suspend the rod, without touching the ends, from a stand using a stirrup and nylon thread.

3. Take a perspex rod (CD) and rub it with another cloth.

4. Without touching the ends of the perspex rod bring each end of the perspex rod up to, but without touching, each end of the polythene rod.

5. Make notes on what is observed.

The diagram below shows how the apparatus is to be set up.



(a) When end C was brought near to end B they attracted each other.

(i) Explain why they attracted each other.

_____

_____

(ii) What would happen if end C were brought near end A?

_____

(3)

(b) The experiment was repeated with two polythene rods.

(i) Describe what you would expect the pupil to observe as the end of one rod was brought near to the end of the other.

_____

_____

(ii) Explain your answer.

_____

_____

(2)

(c) Explain, in terms of electron movement, what happened as the rods were rubbed with the cloths.

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_____

_____

_____

_____

_____

(3)

(Total 8 marks)

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