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

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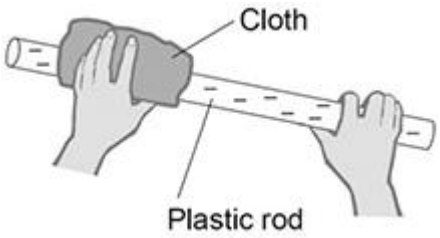
Name of the Student:_____
Max. Marks : 18 Marks **Time : 18 Minutes**

Q1.

Figure 1 shows a plastic rod being rubbed with a cloth.

The plastic rod becomes negatively charged.

Figure 1



(a) Complete the sentences.

Choose answers from the box.

Each answer may be used once, more than once or not at all.

electrons	**neutrons**	**protons**

The plastic rod becomes charged because it gains _____.

The cloth also becomes charged because it loses _____.

(2)

(b) What charge is left on the cloth?

Tick (✓) **one** box.

A negative charge ☐

A neutral charge ☐

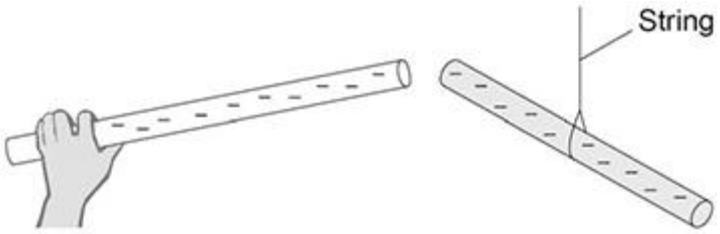
A positive charge ☐

(1)

(c) The negatively charged plastic rod is put near another negatively charged plastic rod that is hanging from a string.

Figure 2 shows the two rods.

Figure 2



What force is exerted on the two rods?

Tick (✓) **one** box.

Give a reason for your answer.

A force of attraction ☐

A force of repulsion ☐

There is no force ☐

Reason _____

_____

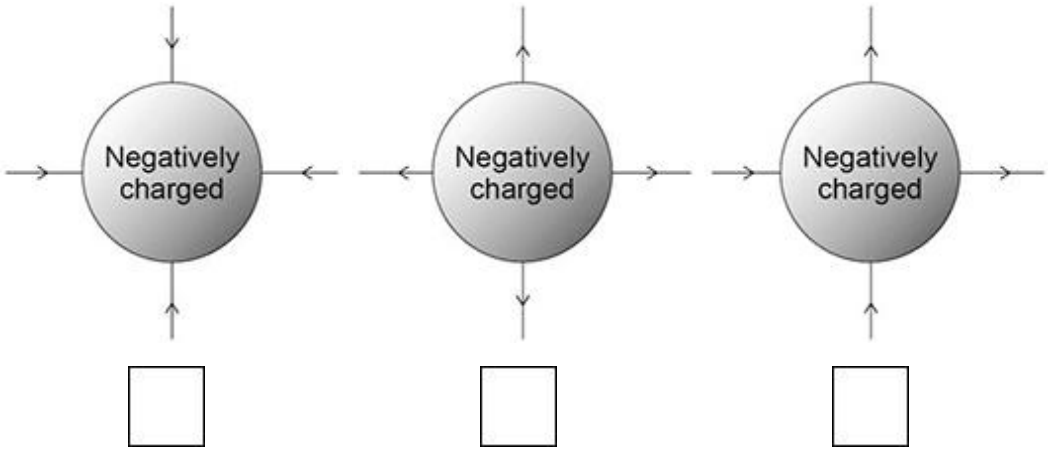
_____

(2)

(d) There is an electric field around any charged object.

Which diagram shows the electric field pattern around a negatively charged sphere?

Tick (✓) **one** box.



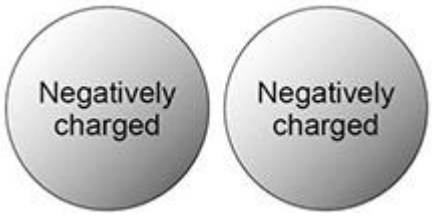
☐ ☐ ☐

(1)

(e) In which position do two charged spheres experience the greatest electrostatic force?

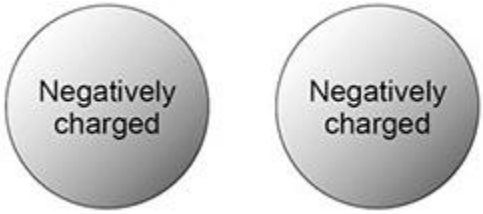
Tick (✓) **one** box.

A



☐

B



☐

C

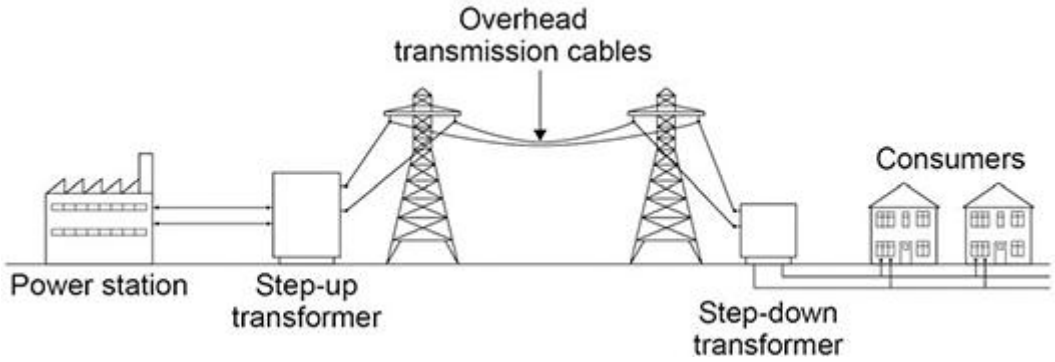
☐

(1)

(Total 7 marks)

Q2.

The figure below shows how electricity is supplied to consumers.



(a) Electricity from the power station can be generated using renewable or non-renewable energy resources.

Complete table below to show which energy resources are renewable and which are non-renewable.

Tick (✓) **one** box in **each** row.

Energy resource	Renewable	Non-renewable
biofuel		
coal		
nuclear		
tides		

(2)

(b) Transformers are used to make power transmission an efficient process.

Complete the sentences.

Choose answers from the box.

Each answer may be used once, more than once or not at all.

charge	**current**	**energy**
potential difference	**resistance**	

The step-up transformer increases the _____ and

decreases the _____.

Using the transformers decreases the _____

transfer from the overhead transmission cables to the surroundings.

The step-down transformer decreases the _____.

(4)

Use the Physics Equations Sheet to answer parts (c) and (d).

(c) Write down the equation which links charge flow (Q), current (I) and time (t).

_____

(1)

(d) The town of Hornsdale in Australia has electricity supplied by a huge battery.

The battery supplies a current of 130 000 A.

Calculate the charge flow from the battery in 5 minutes.

Choose the unit from the box.

coulombs	**newtons**	**watts**

_____

_____

_____

_____

Charge flow = _____ Unit _____

(4)

(Total 11 marks)