Practice Question Set For GCSE
Subject : Physics
Paper-2 Topic: Magnetism And Electromagnetism (Standard Demand Questions)

Name of the Student:_____
Max. Marks : 26 Marks **Time : 26 Minutes**

Mark Schemes

Q1.

(a) (i) an electrical conductor

1

(ii) increase current

accept increase p.d. / voltage

or

use stronger magnets

accept move magnets closer

*do **not** accept use larger magnets*

1

(iii) reverse the poles / ends (of the magnet)

either order

1

reverse the connections (to the power supply)

1

(b) (i) environmental

1

(ii) ethical

allow political (instability)

allow economic (migration)

1

[6]

Q2.

(a) electric drill, electric fan, electric food mixer and electric screwdriver

all four ticked and no others (2)

***either** all four of these ticked and only one other (1)*

***or** any three of these ticked and none/one/two of the others (1)*

2

(b) (i) reverse (the direction of the) current (1)

***or** reverse the connections (to the battery)*

reverse (the direction of the) magnetic field (1)

***or** reverse the (magnetic) poles /ends*

*do **not** credit 'swap the magnets (around)'*

2

(ii) any **two** from:

- increase the strength of the magnet(s)/(magnetic) field
  *do **not** credit 'use a bigger magnet'*

- increase the current
  allow 'increase the voltage/p.d.'
  allow add cells/batteries
  allow increase the (electrical) energy
  allow increase the power supply
  allow 'decrease the resistance'
  allow 'increase charge'
  allow ' increase the electricity'
  *do **not** credit 'use a bigger battery'*

- reduce the gap (between coil/armature and poles/magnets)
  allow increase the (number of) coils

- increase the turns (on the coil/armature)
  *do **not** credit 'use a bigger coil'*

2

[6]

Q3.

(a) increase the current (1)

credit increase the p.d./voltage
credit reduce the resistance
credit have thicker wiring
credit add extra / more cells

1

increase the magnetic field (strength) (1)

credit 'have stronger magnet(s)
*do **not** credit 'bigger magnets' either order*

1

(b) **either** reverse polarity

or connect the battery the other way round

1

either reverse direction of the magnetic field

or put the magnet the other way round / reverse the magnet

*do **not** give any credit to a response in which both are done at the same time*
either order

1

(c) **either**

conductor parallel to the magnetic field

or lines of magnetic force and path of electricity do not cross

1

[5]

Q4.

(a) (i) it moves or experiences a force horizontally to the right

for 1 mark

1

(ii) A – moves in opposite direction or force reversed e.c.f.
B – faster movement or larger force
(**not** move further)

for 1 mark each

2

(b) turns clockwise
oscillates/reverses
comes to rest facing field/at 90^{o} to field/vertically

for 1 mark each

3

(c) number of turns or linear number density of turns current core

for 1 mark each

3

[9]