Practice Question Set For GCSE
Subject : Physics
Paper-1 Topic: Electricity (Standard demand)

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Name of the Student:_____
Max. Marks : 25 Marks **Time : 25 Minutes**

Mark Schemes

Q1.

(a) current rises/starts lower/starts from zero
for 1 mark

ideas that: *
smaller/only 0.45 (A) change in current
quicker/only 2 (ms) for current to settle
slightly lower/0.45 (A) final current
maximum only 0.45 (A) rather than 1.5 (A)
(*must **compare** e.g. "only..." or state figure from first graph)
any 2 for 1 further mark each

3

(b) resistance of filament rises as temperature rises/higher at operating temperature
resistance of X falls as temperature rises/low(er) at operating temperature
total resistance stays roughly the same as temperature rises
so current stays roughly the same as temperature rises
(must be related to previous point)

resistance of X falls faster at first than resistance of filament rises
so current rises (*must be related to previous point*)
operating resistance slightly increased
so operating current slightly reduced
(*must be related to previous point*)
resistance of X high at start
so current zero/low
each gains 1 mark
(must be related to previous point)
(to a maximum of 4)

4

[7]

Q2.

(a)
- diode
- voltmeter
- ammeter

for 1 mark each

3

(b) *idea that*

- current increases or goes up (with voltage)

gains 1 mark

- 'It' refers to current
  but current increases steadily (with voltage)
  gains 2 marks

- (*allow* in proportion) – but not simply a description of the shape of the graph
  gains 1 mark

- no current at first
  but no current until voltage is more than 0.3 (volts)
  gains 2 marks

4

[7]

Q3.

(a) *idea that*

it/current increases (with voltage)
gains 1 mark

but
current increases steadily (with voltage)
(allow in proportion)
gains 2 marks

4

no current at first
gains 1 mark

but
no current until voltage is more than 0.3 (volts)
gains 2 marks

(b) (i) reverse component X/power supply/change battery round
for 1 mark

(ii) *idea that*
X doesn't conduct in opposite/let current through/no current (in opposite direction)
(credit X is a diode*)*
for 1 mark

2

[6]

Q4.

(a) electrical
for full marks an indication of an energy transfer must be given
ignore electricity

1

(to) kinetic (of air / motor / fan)

1

(and) sound

ignore noise

1

(and) energy that heats (the hair / surroundings)

allow heat (energy)

allow light with a correct explanation e.g. glowing element, indicator light

1

(b) energy cannot be created / destroyed

accept energy is conserved

1

[5]