Practice Question Set For GCSE
Subject : Physics
Paper-1 Topic: Electricity (High Demand)

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

Mark Schemes

Q1.

(a) *Formula mark*
P = V × I
accept P = VI ***or*** *W = V 5 A* ***or*** *any transformation*
1

Substitution mark I = 900 ÷ 230
1

Calculation mark 3.9
accept 3.9 ***or*** *3.91* ***or*** *4 for three marks with no working*
1

(b) 900 + 1300 = 2200 ÷ 230 = 9.6
accept 9.57 to 9.6 ***or*** *10 for both marks with no working*
2

(c) 1.2 + 0.45 = 1.65
1

× 0.5 = 0.825
accept 0.8 ***or*** *0.83 for both marks with no working*
1

(d) any **one** from

use less energy (to cook something)
accept fewer energy losses ***or*** *use less electricity*

cook faster
do not credit a cost argument about buying two different ovens
1

[8]

Q2.

(i) **EITHER**
30000 (2) joules/J (1)
or 30 kilojoules/kj
3

OR
power × time = energy
1

time = 120 (seconds)

1

(ii) vibration (of the food processor / some part of the food processor / the food)

1

[4]

Q3.

(a) ordinary cell has higher voltage (normally / at start)
or
ordinary cell 1.3V nicad 1.2V (normally / at start)
for 1 mark

voltage of ordinary cell falls more slowly
gains 1 mark

(*accept* ordinary cell lasts longer)
but
as above with relevant quantification e.g. falls to zero in 60 seconds compared to 6 seconds
or
nicad falls to zero 10 times as fast
gains 2 marks

3

(b) (i) answer in range 32-34 (seconds) (inclusive)
gains 1 mark

but
answer in range 22-24 (seconds) (inclusive)
gains 2 marks

(ii) 12 (seconds)
gains 1 mark

but
2 (seconds)
gains 2 marks

4

(c) resistance of the lamp / filament changes / increases
gains 1 mark

but
resistance of the lamp / filament decreases
gains 2 marks

because the temperature of the filament falls / filament cools
for 1 mark

3

[10]