

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

Name of the Student: _____

Max. Marks : 21 Marks

Time : 21 Minutes

Mark Schemes

Q1.

- (a) (i) power \div voltage = current **or**
 $2800 \div 240 = 11.6 - 11.7$ **or** 12
2 marks for correct answer 1 mark for $2.8 \div 240$ 2
- (ii) resistance = voltage \div current
 $240 \div 11.7$
(efc here) 1
- 20.5 **or** 20.57 **or** 20.6 **or** 21
2 marks for correct answer 1
- ohms **or** Ω
do not credit R 1
- (b) $850 \div 1500 \times 100$
marks only available for division of power 1
- = 56.7
*2 marks for correct answer
for 1 mark accept 5670* 1

[7]

Q2.

- (a) changes the sound wave(s)
to a varying **or** changing (electric) potential difference **or** p.d. **or** voltage
or current **or** to an irregular alternating current or a.c. **or** transfers
sound energy to electrical energy (1 mark is vibrations **or** pulses **or** of
sound **or** in air become electrical waves
*do not credit just 'to electricity' **or** 'to a.c'* 2
- (b) (i) decrease **or** reduce the amplitude
accept less amplitude nothing else added 1

- (ii) increase the frequency **or** decrease wavelength
accept higher frequency nothing else added

1

[4]

Q3.

(a) (i) $P = V \times I$

or equivalent

credit a triangle if part (ii) correctly uses the relationship

*credit power = volts \times amps **or** watts $V \times A$*

do not accept C for current

1

(ii) $(P = 230 \times 10 =) 2300$

credit 2.3

1

W **or** J/s

kW

1

(b) (i) 15 A

*credit 13 A **or** amps*

1

(ii) any **three** from

earth

any short (to the metal tank) causes fuse to blow

fuse is in the live wire

to prevent damage to the heater

credit to stop the current

3

(c) (i) $V = I \times R$

or equivalent

credit a triangle if part (ii) correctly uses the relationship

1

(ii) $(230 = 10 \times R =) 23$

ohms **or** Ω

2

[10]