

Name of the Student: _____

Max. Marks : 21 Marks

Time : 21 Minutes

Mark Schemes

Q1.

(a) (i) 720

*allow 1 mark for correct substitution,
ie 72×10 provided no subsequent step shown*

2

(ii) 720

or
their (a)(i)

1

(b) (i) gravitational potential

*allow gravitational
allow potential*

1

(ii) 432

*allow 1 mark for correct substitution, ie $\frac{21600}{50}$ provided no
subsequent step shown*

2

watt / W

1

[7]**Q2.**

(a) (i) circuit not complete

*accept circuit is broken
accept switch / s are open / off*

1

(ii) 9

*allow 1 mark for correct substitution, ie 0.5×18 provided no
subsequent step shown*

2

(iii) 36

1

(b) can be switched on / off from top or bottom of stairs

1

- (c) (i) (electric) shock
accept fitting becomes live
accept answers giving a possible consequence of electric shock, eg death
1
- (ii) connect the earth wire
1
- [7]

Q3.

- (a) (i) 4.5
1
- (ii) 2.25 or their (a)(i) $\div 2$ correctly calculated
1
- (iii) V_2
1
- (b) (i) 30
1
- (ii) 8
allow 1 mark for correct substitution
ie 0.4×20
allow 1 mark for answers of 4 or 12
2
- (iii) Y
1
- [7]