

Name of the Student: _____

Max. Marks : 24 Marks

Time : 24 Minutes

Mark Schemes

Q1.

- | | | |
|-----|---|---|
| (a) | charge | 1 |
| (b) | (i) blue | 1 |
| | (ii) earth wire | 1 |
| | fuse | 1 |
| (c) | (i) case is non-metal / non-conducting / plastic / insulator
<i>must refer to case / outside of appliance</i>
<i>do not accept plastic coating / covering</i> | 1 |
| | (ii) earth (wire) | 1 |
| (d) | (i) 60 (W)
<i>$P = 3 \times 20$ gains 1 mark</i>
<i>provided no subsequent step shown</i> | 2 |
| | (ii) 15
<i>$300 = 20 \times Q$</i>
or
<i>$20 = 300 / Q$ gains 1 mark</i> | 2 |
| | C / coulombs
<i>must clearly be upper case C accept J / V or As</i> | 1 |
- [11]**

Q2.

- | | | |
|-----|---|---|
| (a) | increases
<i>accept reaches highest value</i>
<i>do not accept increases and decreases</i> | 1 |
|-----|---|---|

- (b) (i) increases 1
- (ii) increases 1
- (c) 18
allow 1 mark for correct substitution i.e. 12×1.5 provided no subsequent step 2
- watt
accept W
answer may be indicated in the list 1

[6]

Q3.

- (a) (i) (3-pin) plug
*do **not** accept plug socket* 1
- (ii) live and neutral 1
- (iii) double 1
- (b) direct current (d.c.) only 1
- (c) (i) live 1
- (ii) too great a current flows
accept a surge of current
accept too great a power
accept an electrical fault
*do **not** accept voltage / energy / electricity too high* 1
- (iii) can be reset
accept does not need replacing 1
- (disconnects circuit) faster
cheaper is insufficient
does not melt is insufficient
quicker to fix / replace is insufficient 1

[8]