



ASSESSMENT and  
QUALIFICATIONS  
ALLIANCE

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Mark scheme  
March 2003

# GCSE

## Science (Modular) Double Award and Physics (Modular)

### Module 10

**Electricity: Foundation Tier**

Question	Key
One	1 – lamp 2 – ammeter 3 – thermistor 4 – fuse
Two	1 – rating 2 – neutral 3 – earth 4 – live
Three	1 – magnet 2 – field 3 – coil 4 – current
Four	1 – 230 volts 2 – 50 hertz 3 – 920 watts 4 – 4 amps
Five	1 – R – The plate has light and dark patches from the image. 2 – Q – Light on the plate makes electrical charges leak away. 3 – P – Dark patches on the plate attract particles of black powder. 4 – S – The powder is transferred to the paper.
Six	2 3
Seven	K – the reading on ammeter $A_3$ is greater than that on $A_2$ N – the reading on ammeter $A_1$ is the sum of the readings on $A_2$ and $A_3$
Eight	8.1 – C, 8.2 – C, 8.3 – A, 8.4 – A
Nine	9.1 – C, 9.2 – A, 9.3 – C, 9.4 – D
Ten	10.1 – D, 10.2 – D, 10.3 – B, 10.4 – A

**Electricity: Higher Tier**

Question	Key
One	1 – R – The plate has light and dark patches from the image. 2 – Q – Light on the plate makes electrical charges leak away. 3 – P – Dark patches on the plate attract particles of black powder. 4 – S – The powder is transferred to the paper.
Two	1 – insulators 2 – electrodes 3 – electrons 4 – ions
Three	K – the reading on ammeter $A_3$ is greater than that on $A_2$ N – the reading on ammeter $A_1$ is the sum of the readings on $A_2$ and $A_3$
Four	the heater transfers 2000 J of energy every second the resistance of the heater is about $26.5 \Omega$
Five	5.1 – C, 5.2 – C, 5.3 – A, 5.4 – A
Six	6.1 – C, 6.2 – A, 6.3 – C, 6.4 – D
Seven	7.1 – D, 7.2 – D, 7.3 – B, 7.4 – A
Eight	8.1 – D, 8.2 – C, 8.3 – B, 8.4 – D
Nine	9.1 – D, 9.2 – C, 9.3 – B, 9.4 – D
Ten	10.1 – C, 10.2 – A, 10.3 – A, 10.4 – B