



# **General Certificate of Secondary Education**

## **Physics A 3453**

### **Module 23: Physics in Action**

*Module Test Answer Keys*

*November 2006 examination series*

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

Further copies of this Mark Scheme are available to download from the AQA Website: [www.aqa.org.uk](http://www.aqa.org.uk)

Copyright © 2006 AQA and its licensors. All rights reserved.

#### COPYRIGHT

AQA retains the copyright on all its publications. However, registered centres for AQA are permitted to copy material from this booklet for their own internal use, with the following important exception: AQA cannot give permission to centres to photocopy any material that is acknowledged to a third party even for internal use within the centre.

Set and published by the Assessment and Qualifications Alliance.

**Physics in Action : Foundation Tier**

<b>Question No.</b>	<b>KEY</b>
One	1 – pressure switch 2 – thermistor 3 – moisture switch 4 – LDR
Two	1 – detecting changes in the environment 2 – carrying out actions 3 – making decisions about the action to take 4 – acting as a switch
Three	1 – R 2 – P 3 – S 4 – Q
Four	1 – OR gate 2 – LED 3 – resistor 4 – capacitor
Five	1 – switch 2 – output 3 – coil 4 – processor
Six	P T
Seven	the camera uses a diverging lens the image is further from the lens than the object
Eight	8.1 – C, 8.2 – C, 8.3 – C, 8.4 – B
Nine	9.1 – D, 9.2 – B, 9.3 – C, 9.4 – A
Ten	10.1 – A, 10.2 – C, 10.3 – B, 10.4 – D

**Physics in Action : Higher Tier**

<b>Question No.</b>	<b>KEY</b>
One	1 – switch 2 – output 3 – coil 4 – processor
Two	1 – output device 2 – acts as a switch 3 – controls the sensitivity of the circuit 4 – input sensor
Three	the camera uses a diverging lens the image is further from the lens than the object
Four	their batteries often need charging they may distract drivers
Five	5.1 – C, 5.2 – C, 5.3 – C, 5.4 – B
Six	6.1 – D, 6.2 – B, 6.3 – C, 6.4 – A
Seven	7.1 – A, 7.2 – C, 7.3 – B, 7.4 – D
Eight	8.1 – D, 8.2 – C, 8.3 – B, 8.4 – B
Nine	9.1 – D, 9.2 – B, 9.3 – C, 9.4 – C
Ten	10.1 – A, 10.2 – D, 10.3, – A, 10.4 – C