

**MARK SCHEME for the May/June 2010 question paper
for the guidance of teachers**

5090 BIOLOGY

5090/31

Paper 3 (Practical Test), maximum raw mark 40

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes must be read in conjunction with the question papers and the report on the examination.

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- 2 (a) drawing marks:
head, (thorax) and abdomen cleanly drawn, min 7 cm ;
6 legs, reasonably correct orientation ; **A** 3 if lateral view
segments shown on/abdomen/leg/antenna ;
- labels:
head (thorax) and abdomen ;
antenna(e) ; **R** feelers
(compound) eyes ;
OVP ; e.g. wing/leg/segment/exoskeleton [2 max]
- (b) (i) & (ii) length of beetle, length of drawing, place indicated ;
expression using these figures ;
magnification properly expressed ; **R** if expression inverted. [3]
A up to 2 d.p. **R** rounding above 0.2
- (c) (i) in Table 2.1:
number for **B** (at least 5) ; number for **C** ; [2]
- (ii) application of formula ;
correct calculation, based on (i) ; (30 minimum) [2]
- (iii) appropriate numbers given ; [1]
- (d) (i) 16 ; [1]
- (ii) bar chart :
axes correct and labelled ;
accurate plotting in equal, ruled columns ; [2]
- (iii) AVP such as : predator/prey/moisture/light intensity/
other environmental preference ; **R** 'suitable' [1]

[Total: 17]