

**MARK SCHEME for the October/November 2006 question paper**

**0610 BIOLOGY**

**0610/05**

Paper 5 (Practical Test), maximum raw mark 40

This mark scheme is published as an aid to teachers and students, 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.

All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

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

The grade thresholds for various grades are published in the report on the examination for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses.

- CIE will not enter into discussions or correspondence in connection with these mark schemes.

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- 1 (a) (i) clear outline **S1** ;  
circular ;  
at least 5cm across ;  
vascular bundles / areas of dye , shown in a ring ;  
dye labelled ; (*ignore dye that has spread out*) [5]
- (ii) length of drawing measured correctly (+/- 2mm) **with units** ;  
(his) drawing length ÷ (his) specimen length ;  
correct magnification ;  
(*needs 'x' and correctly rounded to a max of 1 decimal place*)  
**Correct answer for his data with no answer = 2 ticks = 2 marks** [3]
- (b) in **W2** there are more , vascular bundles / regions of dye ;  
in **W2** scattered throughout the stem ;  
in **W1** , circular pattern / around periphery ; [2 max]
- (c)
- |   |   |   |   |
|---|---|---|---|
| 1 | use of potometer  | use of dye                                | use of balance ;                              |
| 2 | no air bubbles  |   | cover , soil /<br>water , in pot ;            |
| 3 | track movement<br>of , bubble /<br>meniscus / fluid ,<br><b>with time</b> | track movement<br>of dye <b>with time</b> | track loss of ,<br>mass <b>with time</b><br>; |
| 4 | plant with leaves attached ;  |   |   |
| 5 | named factor ;  |   |   |
| 6 | how the factor is varied ;  |   |   |
| 7 | repeat(s) ;   |   |   |
| 8 | same , plant / species / size ;   |   |   |
- [5 max]
- (d) (i) add Benedict's (reagent) ;  
heat / boil ; [2]
- (ii) **Any 2 valid safety precautions such as ~**  
wearing goggles ;  
heating tube indirectly / use water bath ;  
AVP ; [2 max]
- (iii) stays blue / no colour change ;  
reducing sugar , not present / absent ; [2]
- (iv) turns , orange / red ;  
reducing sugar (now) present / sucrose was present ; [2]
- (v) sucrose / non-reducing sugar ; (**A**) *disaccharide* [1]
- [Total : 24]

Page 3	Mark Scheme	Syllabus	Paper
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- 2 (a) (i) arthropoda ; [1]
- (ii) jointed legs / exoskeleton ; [1]
- (b) (i) insect ; [1]
- (ii) wings ;  
 compound eyes ;  
 three parts to the body / head + thorax + abdomen ;  
 3 pairs / 6 , legs ;  
 one pair antennae ;  
*(A) jointed legs if not given in (a)(ii)* [3 max]
- (c) **W5** Diptera ;  
**W6** Decapoda ;  
**W7** Araneae ;  
**W8** Lithobiomorpha ;  
**W9** Odonata ; [5]
- (d) (i) **W5** doesn't fizz / only fizzes a little / fizzes less ;  
**W10** fizzes / fizzes a lot / fizzes more ; [2]
- (ii) 1 **W5** / fly , contains , no / little , (calcium) carbonate ;  
 2 **W10** / mollusc , contains (calcium) carbonate ;  
 3 a lot of / more , (calcium) carbonate in mollusc  
 or other comparative statement ;  
 4 ref. exoskeleton / shell ; [3 max]
- [Total : 16]
- .....