

**UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS**  
International General Certificate of Secondary Education

**MARK SCHEME for the October/November 2008 question paper**

<p><b>0600/03</b></p>	<p><b>0600 AGRICULTURE</b> Paper 3 (Extended Theory), maximum raw mark 80</p>
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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.

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.

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- 1 (a) (i) Reduce less light/condition D  
(ii) Reduce/less shade
- (b) (i) Bright light [1]  
(ii) CO<sub>2</sub> [1]  
warmth/temperature [1]  
(iii) glucose/carbohydrate/O<sub>2</sub>/protein [1]
- (c) (i) root [1]  
flower/shoot/leaf/stem/tuber [1]  
(ii) part appropriate to crop [1]  
(iii) Bedding fuel, compost, roofing or building material  
medicinal, seed production, ornamental use, production of alcohol or Bi-ethanol,  
investigative work/studies, tourism if explained [2]

[Total: 11]

- 2 (a) (i) Description of suitable method, appropriate soil collection  
treatment, pH indicator/paper  
barium sulphate  
reading result/use of colour chart  
use of distilled water  
Max of 2 for procedure ONLY 1 for litmus  
3 only if effective result [Max 3]
- (b) (i) Lime or appropriate method/ground limestone or chalk [1]  
(ii) 2001-2002 [1]  
(iii) Heavy rainfall/change of weather. NO mark for weather [1]  
(iv) removal of crop-heavy grazing, leaching,  
type of fertilizer used [2]
- (c) Release of nutrients/base exchange  
more bacteria – better decomposition  
flocculation and drainage  
brief description of ANY three [3]

[Total: 11]

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- 3** (a) Name of a weed – any relevant  
Description of spread
- (b) strong growth, deep roots, creeping spread/  
large leaf to block light to other plants,  
fast growing, easy reproduction. OWTE any 2 [2]
- (c) (i) wash off/leach/environmental impact [1]  
(ii) spread on to other crops [1]
- (d) plant takes up space  
less light water for weeds  
easier for mechanical weeding, OWTE [2]
- (e) (i) absorbed into system of plant, moves or translocates [2]  
(ii) Age of plant, time prior to harvest needed for pesticide to break down,  
Accept an appropriate time to break down e.g. 2 weeks  
OWTE [2]
- [Total: 12]**
- 4** (a) appropriate description of asexual reproduction [2]
- (b) warm, wet, mild wet windy, high temperature/  
high humidity [2]
- [Total: 4]**
- 5** (a) (i) Poultry. Goats. Fish or any appropriate [1]  
(ii) Quick growth, good conversion rate,  
easy to keep/manage OWTE [2]
- (b) Over cropping, over grazing, clearing steep ground  
slash burn  
any appropriate cause 1 mark  
description 1 mark 2×2 [Max 4]
- [Total: 7]**

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- 6 (a) 1990-2000
- (b) a single crop or livestock production  
one for idea one for explanation [2]
- (c) build up of pests or disease,  
physical or structural effects on the soil  
loss of herb species in grassland  
one for an example one for any suitable explanation [Max 2]
- [Total: 5]**
- 7 (a) area where rainfall occurs [1]  
Idea into which it drains, OWTE  
Where dams could be built [1]
- (b) (i) traps air and water [1]
- (ii) reduces soil disturbance/less evaporation/  
less harm to soil structure by heavy machinery [1]
- (c) (i) allows suspended particles to settle  
or water to clear [2]
- (ii) prevents algae growth [2]  
allow – gravity to provide water pressure/  
stop bird droppings entering tanks OWTE
- [Total: 8]**
- 8 (a) Quick growth, fast maturity, good conversion, healthy  
appropriate meat cut or purpose  
easy reproduction – hardy , resistant to drought, or any appropriate [Max 3]
- (b) (i) more farmers have access to good stock  
choose desirable characteristic improve stock base  
less risk of harm to heifer, no sexual disease spread.  
OWTE any **TWO** suitable [2]
- (ii) gene composition expression of genotypes [2]
- (c) description of selecting desired parent v crossing  
growth and re-crossing the next generation OWTE [4]  
If confused but goods description of cross breeding and hybrid vigour given [Max 2]
- [Total: 11]**

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- 9 (a) idea vegetable more intensive less space  
 lower cost – less fencing needed  
 goats difficult to keep in  
 OR accept any three points that are considered to be relevant and are justified.
- (b) Y higher inputs/outputs  
 one for Y one for reason [2]
- (c) X reason or workings shown  
 idea x more investment less profit [2]
- (d) Idea of effects of disease, drought or poor market prices  
 good years/bad years/Long term investment  
 2 marks for idea and 2 marks for explanation idea [4]
- [Total: 11]**