

MARK SCHEME for the October/November 2008 question paper

0600 AGRICULTURE

0600/03

Paper 3 (Extended Theory), maximum raw mark 80

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.

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

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Page 2	Mark Scheme	Syllabus
	IGCSE – October/November 2008	0600

- 1 (a) (i) Reduce less light/condition D
(ii) Reduce/less shade
- (b) (i) Bright light [1]
(ii) CO₂ [1]
warmth/temperature [1]
(iii) glucose/carbohydrate/O₂/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]

Page 3	Mark Scheme	Syllabus
	IGCSE – October/November 2008	0600

- 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 2x2 [Max 4]
- [Total: 7]**

Page 4	Mark Scheme	Syllabus
	IGCSE – October/November 2008	0600

- 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]**

Page 5	Mark Scheme	Syllabus
	IGCSE – October/November 2008	0600

- 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]