

CAMBRIDGE
INTERNATIONAL EXAMINATIONS

NOVEMBER 2002

INTERNATIONAL GCSE

MARK SCHEME
MAXIMUM MARK : 70
SYLLABUS/COMPONENT : 0600/2 AGRICULTURE (CORE)



UNIVERSITY of CAMBRIDGE
Local Examinations Syndicate

Page 1	Mark Scheme	Syllabus	Paper
	IGCSE Examinations – November 2002	0600	2

1. (a) (i) sub-soil; 1
- (ii) 1. growth of roots; 1
2. CO₂ / SO₂ + water;
Acid dissolves rock; R breaks down rock 2
- (b) same key as example;
sand / clay / humus in a balanced proportion; 2
- (c) B; the lime flocculates / breaks up the clay; 2
- B; lime is alkaline; 2
- [10]
2. (a) (i) plant Q; 1
- (ii) large / colourful petals;
nectary / scent;
enclosed parts;
simple stigma; any two 2
- (iii) food storage / spread of plant (asexual reproduction) / stability; 1
- (iv) nodules; 1
- (v) bacteria; 1
- (b) (i) transpiration; 1
- (ii) Q;
larger surface area; 2
- (c) (i) fungus; 1
- (ii) remove and burn /use fungicide; 1
- (d) Q because larger leaves; shade out weeds;
- or
- P because food reserve in rhizome; enables growth; (no mark for choice) 2
- [13]

3. (a) (i) fork;
hoe;
spade; R shovel **any two** 2
- (ii) do not leave them lying around / only use for correct purpose; 1
- (iii) aeration;
improve drainage;
enables root penetration; **any two** 2
- (b) aspect - exposure to wind;
nature of soil - drainage / fertility / pH;
shade - light availability;
slope - water retention / water availability; **any three** 3
- (c) (i) appropriate fruit condition eg. hardness ; colour ; moisture content ;
leaf ; plant yellowing **any two** 2
- (ii) method of harvest - combine harvester ; cut with panga ; hand pick;
harvest or post harvest detail - grain separation ; dry; 2
- (iii) damp; effective storage detail eg. off ground;
fungi; store in dry;
pests e.g weevil ; traps / baffles / baits; 2
[14]
4. (a) (i) growth / tissue development / cell development; 2
fats;
- (ii) water / roughage / fibre; 1
- (iii) respiration; 1
- (iv) bones / teeth / egg shell; 1
- (v) chlorophyll; 1
- (b) called photosynthesis;
energy from sun;
joins CO₂ + H₂O;
catalyst chlorophyll; 4
- (c) (i) tubers are bulk so fills animal up / low ratio of protein and carbohydrate to bulk; 1
- (ii) grains have high protein / high energy; 1
[12]

Page 3	Mark Scheme	Syllabus	Paper
	IGCSE Examinations – November 2002	0600	2

5. (a) (i) long lasting; R good conductor of heat
 does not harbour pests;
 low fire risk; any two 2
- (ii) hens can escape via nest box and roof / egg box inaccessible; 1
- (iii) rotation allows grass to re-grow;
 parasite levels controlled; isolation of sick poultry, control breeding any two 2
- (b) advantage - recycling waste energy efficient;
 nutrients in droppings used by pond life which are food for fish;
 R droppings food for fish
 saves land space;
 hens safer from predators; any one 1
- disadvantage - droppings breakdown accelerates stagnant conditions;
 risk of parasites / disease spread; water pollution any one 1
- (c) turkeys not such good layers;
 turkeys bigger so eat more;
 idea that turkeys less economic but with reason; any one 1
 [8]
6. (a) (i) A. sperm duct / vas deferens
 B. urethra; 2
- (ii) medium for sperm;
 activate sperm;
 lubrication; any one 1
- (b) 1. isolation;
 2. spray cord / ensure suckling / clear nostrils; 2
- (c) provides high energy food / antibodies. 1
- (d) 1. Less robust / well-grown R dies.
 2. quicker recovery / more young in given time; 2
- (e) (i) $32+32+32+4=100$
 64 68; 1
- (ii) 2003; July
 carrying capacity is $18 \times 5=90$; 2
- (iii) compaction;
 erosion;
 injury to plants;
 poor recovery growth; R references to animals any two 2
 [13]