

Mark Scheme (Results) January 2007

GCE

GCE French (8190/9190)

General Principles

Symbols used in the mark scheme

Symbol	Meaning of symbol
; semi colon	Indicates the end of a marking point.
eq	Indicates that credit should be given for other correct alternatives to a word or statement, as discussed in the Standardisation meeting. It is used because it is not always possible to list every alternative answer that a candidate may write that is worthy of credit.
/ oblique	Words or phrases separated by an oblique are alternatives to each other.
{ } curly brackets	Indicate the beginning and end of a list of alternatives (separated by obliques) where necessary to avoid confusion.
() round brackets	Words inside round brackets are to aid understanding of the marking point but are not required to award the point.
[] square brackets	Words inside square brackets are instructions or guidance for examiners.

Crossed out work

If a candidate has crossed out an answer and written new text, the crossed out work can be ignored. If the candidate has crossed out work but written no new text, the crossed out work for that question or part question should be marked, as far as it is possible to do so.

Spelling and clarity

In general, an error made in an early part of a question is penalised when it occurs but not subsequently. The candidate is penalised once only and can gain credit in later parts of the question by correct reasoning from the earlier incorrect answer.

No marks are awarded specifically for quality of language in the written papers, except for the essays in the synoptic paper. Use of English is however taken into account as follows:

- the spelling of technical terms must be sufficiently correct for the answer to be unambiguous
e.g. for amylase, 'ammalase' is acceptable whereas 'amylose' is not
e.g. for glycogen, 'glicojen' is acceptable whereas 'glucagen' is not
e.g. for ileum, 'illeum' is acceptable whereas 'ilium' is not
e.g. for mitosis, 'mytosis' is acceptable whereas 'meitosis' is not
- candidates must make their meaning clear to the examiner to gain the mark.
- a correct statement that is contradicted by an incorrect statement in the same part of an answer gains no mark - irrelevant material should be ignored.

Question 1

Maximum mark

(a) An explanation to include **two** from:

1. succession changes of {organisms / eq} with time;
2. (earlier groups) change conditions;
3. better suit later groups / eq;
4. competition;

2 marks

(b) A description to include **two** from:

1. characteristics compared;
2. dichotomy / description of questions;
3. examples of characteristics;
4. reference to larvae developing into adults;
5. reference to need for magnification;

2 marks

(c) (i) 9 (days);

1 mark

(ii) An explanation to include **two** from:

1. no record of environmental conditions;
2. temperature may vary / named environmental factor varies;
3. development rate of insects varies;
4. time taken to lay eggs varies / delay before finding corpse / reason for delay e.g. died at night;
5. {reference to /example of} body's previous treatment;

2 marks

Question 1 continued

Maximum mark

(d) A description to include **two** from:

1. visual identification;
2. from picture / by relatives / eq;
3. dental examination;
4. compared with records (of missing person);
5. fingerprints;
6. compared with records;
7. DNA testing;
8. compared with existing samples / relatives;

1 mark for technique; 1 mark for description of comparison.

2 marks

Total 9 marks

Question 2

Maximum mark

(a) A description to include **three** from:

1. suitable method eg quadrat / point quadrat / pitfall trap;
- 2/3. detail e.g. percentage cover / counting / abundance scale;;
4. reference to belt transect /ref. to choosing intervals;

3 marks

(b) valid example eg predators / herbivores / competitors / human factors / grazing / prey / food / parasites;

1 mark

(c) (i) any **one** valid e.g. pH / water / minerals / eq / particle size;

1 mark

(ii) correct example;
detail;

2 marks

(d) A discussion to include **three** from:

1. pigments;
2. leaf area;
3. growth pattern;
- 4/5. any valid point;;

3 marks

Total 10 marks

Question 3

Maximum mark

- (a) A - (B-cell/B-lymphocyte)
B - clone of B cell / activated B cells / B effector cells / eq;
C - memory B cells;
D - plasma cell / antibody secreting cell;
E - T-cell / helper T-cell / eq;

4 marks

- (b) A suggestion to include **two** from:
1. HIV kills lymphocytes / reduces lymphocyte numbers;
 2. reference to T helper / CD4 cells;

2 marks

- (c) (Aabb x aaBb)
Gametes Ab, ab;
aB, ab;
aabb, aaBb, Aabb, AaBb;
correct genotype identified;
 $\frac{1}{4}$ / 1:3 / 25%;

4 marks

- (d) Any **two** from:
1. karposi's sarcoma;
 2. excessive sweating;
 3. chronic lung infections/TB;
 4. pneumonia;
 5. opportunistic infection;
 6. weight loss;
 7. extreme lethargy / tiredness;
 8. any valid point;

2 marks

Total 12 marks

Question 4

Maximum mark

- (a) (i) twice as much / double / by 15 000 000; 1 mark
- (ii) 85% of 60 / 60 / 100 x 85;
51 (million); [full marks for just correct answer] 2 marks
- (b) (i) smaller area;
more fragmented; 2 marks
- (ii) A suggestion to include two from:
1. less variety / smaller gene pool;
 2. lose communication / no corridors / isolation;
 3. reference to genetic drift / random changes in gene frequency;
 4. less interchange of genetic information;
 5. reference to possible speciation;
- 2 marks
- (iii) A discussion to include five from:
1. biofuel less polluting;
 2. palm carbon sink;
 3. renewable / sustainable resource;
 4. economic benefits;
 5. palms provide new habitat;
 6. danger of extinction of apes / inbreeding / eq;
 7. less biodiversity / loss of forest resources;
 8. forest bigger carbon sink;
 9. problems of monoculture;
 10. any valid point e.g. habitat loss;
- 5 marks

Total 12 marks

Question 5

Maximum mark

(a) Penicillin:
no cell wall in virus;

Tetracycline:
no protein synthesis in virus;

2 marks

(b) A description and an explanation to include **four** from:

1. penicillin bacteriocidal;
2. because cell destroyed / eq;
3. decreases number (of living cells);
4. tetracycline bacteriostatic;
5. no reproduction / eq;
6. same number (of living cells);

4 marks

(c) A suggestion to include **three** from:

1. slows growth / fewer cells;
2. more time for immune system to respond;
3. reference to detail of specific immune response;
4. phagocytosis / description;

3 marks

Total 9 marks

Question 6

Maximum mark

(a) A discussion to include three from:

1. increases in population;
2. exponential;
3. not sustainable with finite resources / eq;
4. reference to competition;
5. reference to advantageous characteristics compete better;

3 marks

(b) An explanation to include three from:

1. Darwin - change random;
2. not directional;
3. selection;
4. acquired characteristics not passed on;
5. Lamarck - change in response to environment / description of example;
6. passed to offspring;
7. reference to inheritance of acquired characteristics;

3 marks

(c) A suggestion to include two from:

1. acquired changes unlikely to affect DNA;
2. so cannot be passed to offspring (in gametes);
3. explains variation as mutation / change to DNA;

2 marks

Total 8 marks

TOTAL FOR PAPER: 60 MARKS