# Mark scheme
# June 2003

# GCE

# Computing

## Unit CPT3

- **Marks\* mean that the marks for that (part) of question are dependent on the evidence.**

| Qn. | Answer | | Mark | Evidence | Total Mark |
|---|---|---|---|---|---|
| 1a | *For two* **extra** *fields; name (1 mark),* | *& logical use (1 mark);* | | | |
| | Date received; **-** | } to check that re-mark is turned round within 3 | 1 + 1 | | |
| | Date returned; | } weeks; | 1 + 1 | | |
| | Original Grade; | } to find if remark changes grade; | | | |
| | Re-mark Grade; | } | | | |
| | **A** both dates or both grades + similar use | | | | |
| | *Other fields  accepted if used appropriately, but if not obvious, use must be sensible* | | | | |
| | e.g.      Original Examiner; Re-mark Examiner; Centre address | | | | |
| | **A** Remark_ID (primary key field) | | | | |
| | *Evidence* i of definition, | i. Coding of definition / table design view/ written description in design section / spreadsheet design | | 1 | |
| | ii of **use**<br>*Look at page, and continuation page if obvious, Allow 2 or 3 references.* | ii. coding of use / query design / formula view  / output clearly using specified field | | 1 | **6\*** |

| 1b | *Candidate No.* text / string; | most efficient way of storage / because of leading zero; | 1 + 1 | | |
| | **A** Integer | Whole number, **R** no calcs required | | | |
| | **R** Number, Long Integer | < 32,000 | | | |
| | *Scripts return* Yes/No / Binary /Boolean / Text 1 (3) char long;    **R** alpha | Only 2 possible answers; | 1 + 1 | | |
| | *Original mark* Integer; | | | | |
| | **A** Byte, Percent to 0 dp | | | | |
| | **R** Number, long integer | always a whole number; | 1 + 1 | | **6** |
| | *1 mark for type, 1 for reason.* | *If wrong type, reason not given.* | | | |
| 2a i | Appropriate method used; | e.g. IF statement / Filter / QBE / SELECT  **A** Search  **R** Look for | 1 | | |
| | Details of method in action; | | 1 | | |
| | *e.g.* | *IF subject_code = required_subject_code THEN ...* | | | |
| | | *Filter on subject code column in spreadsheet* | | | |
| | | *QBE with subject code criteria* | | | |
| | | *SELECT details WHERE Subject_Code = required_subject_code* | | | |
| | *Allow method only for (i); not (ii) and (iii).  Must be able to produce hard copy list by method given.* | | | | |
| | Evidence – must be coding / QBE design grid. SS special case where explanation of filters accepted | | | 1 | **3\*** |

AQA

| | | | | | |
|---|---|---|---|---|---|
| 2 a ii | Fields for both grades / use lookup to find grades; | | 1 | | |
| | Extra field for / calculate difference between grades; | | 1 | | |
| | // | | | | |
| | IF LOOKUP(original grade) <> LOOKUP (re-mark grade) | *1 mark for IF function, 1 mark for working 'LOOKUP' function* | 2 | | |
| | // | | | | |
| | SELECT / QBE etc. marked as above | *No need to test that mark has changed as if it hasn't, the grade will not change anyway. Not wrong if they have done so.* | 2 | | |
| | Evidence – hard copy of list | | | 1 | **3*** |
| 2 a iii | Date received field; (*even if given in Qn 1*) | | 1 | | |
| | Today's date input / stored; | **A** date returned / remarked field | 1 | | |
| | Extra fields for /calculate difference between dates /other suitable use to filter required records ; | | 1 | | |
| | Evidence – coding or hard copy | | | 1 | **4*** |
| 2b | Repeat….Read next record….until EOF / While Not EOF DO; | **A** *SQL – max 3 marks* | 1 | | |
| | IF Remark_date = Today's _date; | **R** *QBE design grid (although expression may get a mark)* | 1 | | |
| | Compare old and new grades; | | 1 | | |
| | IF grades unchanged THEN; | | 1 | | |
| | Print details; | | 1 | | |
| | Good flow of logic; | | 1 | | |
| | *1 mark per point* | | | | **5** |
| | | *To max* | | | |

| 3a | Appropriate steps for placing logo:   Any 3 points<br><br>*e.g. scanned in logo from spec. / re-created it from ClipArt;*<br><br>*saved it as a (type specified) file;*<br><br>*importing / inserting;*<br><br>*placing / sizing;*<br><br>*set it up in a template / report / printed to provide pre-printed stationary;* | Max | 3 | | |
|---|---|---|---|---|---|
| | Evidence Hard copy of report with Logo | | | 1 | **4\*** |
| 3b | Other criterion for good design;<br><br>Method of achieving this;<br><br>For two such criteria each:<br><br>    *e.g. spacing of information;*<br><br>    *clear layout;*<br><br>    *specific contents as specified in brief;*<br><br>    *other if appropriate;* | | 1<br><br>1 | | |
| | Evidence    Other design criteria  1 mark each to max: | **A** *if document not hard copy, (may be design) or not referenced.* | | 2 | **6** |

AQA

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|---|---|---|---|---|---|---|
| 4a | Simple validation rule / method; Need type of rule, details<br><br>Other workable method accepted; | **A** I would have…. with suitable method<br><br>*Details of rule should be in context* | 1 | | **1** |
| 4b | Test data of two candidates with same number from different centres;<br><br>If two candidates were doing same subject;<br><br>// composite primary key on remark record;<br><br>Centre no & candidate number;<br><br>// Use auto-number / different primary key;<br><br>// Set centre number to no duplicates;<br><br>Candidate number to duplicates – yes;<br><br>//Alternative valid suggestions accepted;; | **A** compound key; | 1<br><br><br>1<br><br><br><br>1<br><br>1 | | |
| | *Evidence:* printout showing this / written explanation / table in design view with composite key / test plan with evidence of some testing. | Can be given even if test data not given. | | 1 | **3\*** |
| 4c | Example of test data being increased + evidence<br><br>Example of test data being decreased + evidence | *Output showing mark increased / decreased.  Test plan with evidence of some testing.*<br><br>*Can evidence mark even if (i), (ii)  not given..* | 1<br><br>1 | 1<br><br>1 | **4\*** |
| 5a | Candidates (many) are entered from (one) Centre;<br><br>Candidates (many) take (many) subjects;<br><br>**A** many ~ one (as that is the case for this spec.)<br><br>Centres (many) enter candidates for (many) subjects; | *1 mark for each correct relationship;*<br><br>**A** *relationship diagram from Access if shows 1 to many* | 1<br><br>1<br><br><br><br>1 | | **3** |

| | | | | | |
|---|---|---|---|---|---|
| 5b | Interview with; | subject officer (suitable manager); | 1 + 1 | | |
| | Questionnaires to: | Centres; | 1 + 1 | | |
| | Look at documentation; | past records / statistics; | | | |
| | Observation of; | old system; | | | |
| | *Other suitable, but must be different.* | *Data source accepted on its own, method needs source for credit.* | | | **4** |
| 6a | Validation Rule; | Mark ≤ 100 / range check / presence check on specified field(s); | | | |
| | Second entry; | in verification mode; | | | |
| | Visual check; | by a second person; | | | |
| | System check; | on all amendments; | | | |
| | Control totals ' check digits; | on batches of data entered; | | | |
| | OCR / scanner for candidate details; | to eliminate human error at this stage; | | | **2** |
| | **A** input masks | **A** Referential integrity if explained | | | |
| | *For 1 suggestion, up to 2 marks.* | *1 mark for method, 1 for expansion relating to their solution* | 2 | | |
| 6b | Physical locks, cards; | controlled entry to locations; | | | |
| | network firewall; | which controls access through to the database; | | | |
| | encrypt data; | so unintelligible to casual user / use a key to encode file; | | | |
| | Keys / cards / biometric identification (e.g. retina scan); | for registered users; | | | |
| | (password protected) screen savers; | which come in after the computer has not been used for so-many minutes; | | | |
| | system password / Log off terminals; | to restrict access to network / workstation / when not in use; | 4 | | **4** |
| | log of network users; | *up to 2 marks for each of 2 suggestions to max :* | | | |

AQA

| 7a | Comparison with original objectives;<br><br>Number of complaints;<br><br>Number of breakdowns / maintenance incidents;<br><br>Cost of a remark compared to old system;<br><br>Turnaround time for a remark;<br><br>Data volumes as anticipated;<br><br>Ease of Use / user feedback / measure of user satisfaction; | *1 mark for each of 3 suggestions to max:*<br><br>*Must be in context.* | 3 | | **3** |
|---|---|---|---|---|
| 7bi | There may be a need to add another part to the system;<br><br>An error may have been discovered once the system was up and running;<br><br>There may be a better / more efficient / way of doing some part;<br><br>Change in Technology<br><br>**R** Change in grade boundaries, new subjects | *Adaptive, corrective, or perfective accepted if explained.*<br><br><br><br>*1 mark for one reasonable suggestion* | 1 | | **1** |
| 7bii | Annotated listing of program / macros;<br><br>Functional description of modules;<br><br>Description of all formulae used / formula view;<br><br>Testing procedures, including test data used with results;<br><br>Data dictionary / list of variables;<br><br>File structure documentation;<br><br>System requirements;<br><br>Data flow diagrams;<br><br>System flow charts;<br><br>Forms, reports, queries, tables in design view;<br>**A** ER Diagrams; | *1 mark for each of 3 items to max* | 3 | | **3** |
| | TOTALS | | 54 | 11 | **65** |