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ASSESSMENT and QUALIFICATIONS ALLIANCE

General Certificate of Education

Applied Information and Communication Technology 8751, 8753, 8756 & 8759

IT13 Systems Analysis

Report on the Examination

2008 examination - June series

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Dr Michael Cresswell Director General.

Unit 13: Systems Analysis (IT13)

The unit is about the investigation, feasibility and logical analysis for a proposed system (application). Most centres correctly stopped at the logical analysis, although there was much evidence of assumptions about implementation in a database package.

Many candidates followed the logical path through the portfolio and produced coherent pieces of work. Some candidates planned the testing of the end solution rather than the testing of the analysis that was the subject of the portfolio.

For the data analysis, it is acceptable, at logical analysis stage, to have a many-to-many relationship between entities to start with. First normal form, which is the only step required in logical analysis, would create a third entity to remove the many-to-many relationship, by creating a 'linking' entity. There is no requirement to fully normalise the data at this stage as it is not known how the data will be held.

AO1 – Practical analysis work – i.e. system specification production

Row 1 – Some candidates produced accurate DFDs that went beyond level 1, gaining 2 or more marks, but very few showed clear understanding of the technique. Many 'process' boxes contained narrative rather than process titles.

Row 2 – Some candidates produced understandable process specifications, either in structured English or as a flowchart, but many were incomprehensible or given in terms of a MS Access query, which is not relevant at logical analysis stage.

Row 3 – Both the E-R diagram and a data dictionary had to be present to gain 1 mark. There were many candidates who failed to include one or the other or whose data dictionary did not bear any relation to their E-R diagram or the system they were specifying.

Row 4 – most candidates scored at least 1 mark for some input specifications, although there was a tendency to include only a screen design. For the higher marks, annotations as to where the data in the fields was from and how it was entered was necessary, and extra description, on a field by field basis with accurate spacing, entry field sizes and positioning on screen of all text and fields was required for the top mark.

Row 5 – Most candidates scored 1 mark for some form of output design. Detail, accuracy and annotation is required for the 2nd mark.

Row 6 – The standard ways of working for this unit is concerned with using the correct symbols in DFDs, E-R diagram and Data Dictionary, as well as showing sensible and logical folder and file names, version numbering and so on. Having proper naming conventions for the data fields is also necessary for the higher marks. Most candidates scored 1 mark at least, with the stronger candidates gaining 2 or 3.

AO2 – Investigation

Row 1 – Many candidates used interview and questionnaires as their two investigation techniques, expecting to gain 2 marks. However, a questionnaire is often not an appropriate method, so if the candidate in these cases had not also used another technique (observation or looking at documentation) then they gained only 1 mark. Most candidates scored at least 1 mark here, with many scoring both marks.

Row 2 – Many centres had directed their candidates well here, so there were some excellent discussions of different investigation techniques and why they would use or not use each one. Many candidates scored 2 or 3 marks on this row.

Row 3 – The system descriptions varied from a short paragraph to a full company history, with some showing a clear understanding of the business processes involved for which a system is being proposed. Most candidates scored 1 mark and many scored both marks here. Although not explicitly required to achieve these marks, a brief discussion of what is currently in place and any shortcomings would underline the need for a new or improved system.

AO3 – Feasibility Study report

Logically, AO2 row 3 is the start point for the feasibility report and is the introduction to the feasibility discussions about the proposed new or improved system. Between the work for AO3 rows 4 and 5, there should logically be a section of the report offering alternative solutions to the problems of developing this system. This is assessed in AO4, row 6 of the marking grid.

Row 1 – Combined with AO2 row 3, most candidates clearly showed what the system is for and most candidates also included a comprehensive list of client needs, although some were confused.

Row 2 – For more than 1 mark, candidates had to include both a High level (Level 0) DFD, also known as a Context Diagram, and a description of the scope of the proposed system.

Row 3 – Many candidates included some statements about hardware, software or personnel, but many failed to discuss what is currently in place, as well as what is required to meet the requirements of the new system. Some candidates scored all 4 marks available by showing a clear understanding of these issues.

Row 4 – Many candidates produced cost-benefit analyses but failed to mention constraints on development, thus scoring no marks on this row. For the 4th mark, external constraints, such as legal aspects, supplier or customer considerations needed to be included.

Row 5 – Most candidates scored 1 or 2 marks for their recommendation. It is expected that an order of actions might be recommended and priorities created, for the 3rd mark. To gain the 4th mark, the feasibility report needs to have been taken back and checked with the client – only a few candidates provided evidence of this having been done.

A04 – Evaluation

Row 1 – Up to two marks could be gained by having narrative in a diary and time-plan and through the production of the two analysis documents.

Row 2 – as time management and evidence of meeting deadlines are assessed on the same row for this unit, it is particularly important for candidates to include time estimates (in hours) with their task lists.

Row 3 – Candidates could score 1 or 2 marks on the basis of their description of client needs and requirements given in the feasibility report (AO2, row 3). Many did not provide any evidence for this row, though a few did gain marks by explaining that they would take it to the client to see if it would meet their needs from the business perspective. A further few candidates managed to gain additional marks by saying how they were going to test the proposed system, in logical form, against those requirements.

Row 4 – Many candidates scored no marks for testing as they thought this was to do with testing the finished system, whether or not they were developing it. Candidates should consider such questions, to do with the accuracy of analysis, as:

- Is the defined scope correct?
- Are the DFDs correct?
- Are the designs, processes, and data analysis all correct?
- How can I get it checked, and by whom?

This is the strategy required here. Only a few candidates scored any marks at all on this row or the next.

Row 5 – Some candidates scored 1 mark on this row for showing that they had checked some of the analysis with the client, and a few had used an expert (generally the teacher) or a third party, to look at their work.

Row 6 – Some candidates scored 1 or 2 marks on this row, but only a very few actually took their recommendations back to the client and adjusted them after feedback.

Row 7 – Most candidates scored 2 or 3 marks for the standard of their written expression. For the higher marks on this row, the Investigation write-up, the feasibility study report and the systems specification should be presented as such, with separate contents pages, headers and footers and presented properly divided into sections.

Mark Ranges and Award of Grades
Grade boundaries and cumulative percentage grades are available on the **Results statistics** page of the AQA Website.