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ASSESSMENT and QUALIFICATIONS ALLIANCE

General Certificate of Education

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

IT11 Communications and Networks

Report on the Examination

2009 examination - June series

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Unit 11: Communications and Networks (IT11)

The unit concerns specifying and creating a network for a client. The portfolio need only contain evidence required for the assessment criteria in the mark scheme – there is no requirement to include class investigations about different topologies or types of network. Some portfolios included an excess of pages, amounting to up to a third of the portfolio, which gained no marks.

Some centres did this unit as a 2-part portfolio – with the AO1 practical work using a centre-set scenario, in a lab in the school or college. Some had a lab network setup that did not relate to anything specified, which made it harder for the candidates to provide useful high-scoring evidence against client needs or evaluation criteria. Candidates who had real business clients tended to produce better quality evidence for AO2 and AO3.

Witness statements were used wisely to support candidate evidence in many cases. Teachers should be careful to only sign witness statements where they have seen the work done by the candidate. The relevant JCQ guidelines concerning witness statements should be consulted in order to ensure that recommended practice is being followed.

AO1 – Practical work

Row 1 to Row 3 – The practical work can be evidenced by a variety of means. Hardware and operating system software setup can be shown by photograph or by a witness statement with precise, personalised statements. Hardware or other software installation and any configuration is best shown using screenshots. Higher marks are only available for well-annotated work with explanations and justifications clearly given.

Row 4 - The implementation schedule that is being followed should be a separate task by task checklist of putting together the specified network (this is produced in AO3 if the candidate is putting together the real network specified, or may be a more specific one for the practical exercise carried out in the lab). This implementation plan should have time estimates (in minutes) against each very low level task. Actual time should be recorded and witnessed by an observer. Without a schedule in the portfolio, this row cannot have marks credited.

Row 5 – Standard ways of working specific to this unit are given on the marking grid. Discussion of these topics should be in relation to the designed or created network and NOT the candidate's own work. There is no need to see how the candidate organised their own work, nor any general ergonomic or health and safety advice.

AO2 – Client aspects

Having a real client makes a big difference to the marks gained in this section. It enables an interview to take place, and real user requirements to be identified that gave the basis for the planning of a network to meet those requirements. The planned network does not, of course, actually need to be constructed.

Candidates need to show their understanding of organisational use of hardware and software, for instance: Home versions of software or single licence packages are rarely going to be valid recommendations for any organisation. Multiple copies of software will most likely be required, a fact very often missed by candidates.

There is no requirement to cost the designed network, or to worry about a budget, for the purposes of the portfolio assessment requirements.

AO3 – Network specification

Row 1 – The physical plan of the office, factory or house should show major obstacles, walls, furniture etc and where the various network nodes will go. Alongside this, all connections need showing. To get 2 marks, technical details need adding, such as types of connector, MAC and IP addresses, workstation names and so on. These details could be shown in an accompanying table. For the 3rd mark, a narrative is required that justifies the layout.

Row 2 to Row 4 - Some candidates provided comprehensive lists of hardware, software and furniture. Many failed to relate their investigations or recommendations to the client, which is necessary for the maximum marks.

The computer hardware required here is a list of all equipment needed to make up the specified network. It is not necessary to go into detail about PC parts. Information cut and pasted from the Internet will only gain a single mark, unless descriptions, decisions and justifications are written by the candidates. Office furniture is not part of the assessment requirements.

Systems software and utilities includes the operating system, anti-virus and firewall programs,. Many candidates failed to differentiate between the operating system for the server and that for the clients. Better candidates related the software identified to client needs.

Applications software could cover generic packages or any specific or bespoke software requirements. As noted above, home versions are unlikely to be suitable for business environments.

Row 5 – Many candidates scored well on the configuration row, as the evidence for AO1 often showed operating system, hardware and application software configurations. Configuration includes how machines on the network are set up; which is being used as a print-server, for instance; what systems and applications software needs installing directly onto which machine and so on

Row 6 – Many candidates used the Internet for their research. If books or other sources were used, it was rare to see any explanation as to why.

Row 7 –The implementation schedule is for setting up and installing the specified network from AO2 and AO3 – a logical order of tasks is required that can be used as a checklist as well. Estimates would be expected to be in minutes here. Few candidates scored high marks on this row, because of the lack of detail.

A04 – Evaluation

Row 1 – Evidence for this row came from the time plan (if it had a monitoring column), the implementation narrative, and the narrative and evaluation that usually occurred towards the end of the portfolio. Most candidates could score 1 mark here. Very few candidates were able to “critically” review their actions by using objective examples, giving instead simple explanations for failures.

Row 2 – Many candidates failed to estimate the time required for each task in hours, so only 1 mark was available to them. Guidance on this had been given at standardising meetings.

Row 3 – Some candidates had monitoring comments on the time plan, or a diary, which was backed up with witness statements and were able to achieve up to maximum marks depending on the detail provided.

Row 4 – There was very little evidence of testing of the network – for example, simple ping testing or printer test pages, but in some cases testing of the specification was evident, by taking it back to the client, or checking that the network worked for the client once set up. Having a good and detailed test plan (Row 5) would enable better quality testing to be performed. Only a very small minority of candidates showed that they had taken steps to rectify failed tests. If test evidence is from a lab exercise, then a separate test plan needs to be produced, and labelled as such.

Row 5 – Evaluation criteria should be for the planned and designed network, derived from client needs. The test plan is associated with this. The test plan needs to give every step required, checking that each client machine works, each user can log on and access the areas that they have permission for and so on.

Row 6 – This is different from row 1 in that it should objectively review the network solution as created (or specified). Again, in only a few cases did candidates "critically" review their solution to gain 3 or 4 marks by using objective evidence (results of testing or client feedback).

Row 7 – Because this is a technical unit, many candidates were able to gain 2 or more marks for use of specialist vocabulary, although this had to come from their own descriptions rather than from any cut-and-pasted information from other sources.

Mark Ranges and Award of Grades

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