



General Certificate of Education

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

IT11 Communications and Networks

Report on the Examination

2010 examination – June series

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Unit 11: Communications and Networks (IT11)

The majority of centres assessed the portfolios of their candidates accurately. Portfolios were seen across almost the full range of marks

This unit concerns specifying and creating a network for a client. The portfolio need only contain evidence required for the criteria in the mark scheme – there is no requirement to include class investigations about different topologies or types of network. Some portfolios carried an excess of pages, amounting to up to a third of the portfolio that did not contribute to the marks awarded.

Some centres did this as a 2-part portfolio – with the AO1 practical work using a centre-set scenario in a lab in the school or college. Candidates who had real business clients tended to produce better quality evidence for AO2 and AO3 and often achieved higher marks as a result. Others 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 matched to client needs or criteria.

Some centres had evidence of candidates using the same photographs or screenshots as other candidates. This is unacceptable and could result in all such candidates being awarded no marks for those rows affected, as it is not clear who the originator is. Assessors are asked to ensure that only work produced by the candidate is included in the portfolio, or where group work has taken place it is made clear what the candidate's contribution was.

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. Teachers are advised to consult the JCQ guidelines concerning witness statements in order to ensure that they are following recommended practice.

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 witness statement, with precise, personalised statements unique to each candidate. 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 task by task checklist of putting together the specified network (produced in AO3 if putting together the real network specified, or a more specific one for the practical exercise if not), separate from their whole unit time-plan. 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.

Candidates need to show their understanding of the 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 business. Multiple copies of software will most likely be required, a fact very often missed by candidates. Network-related software, such as operating systems (for client and server) and firewalls, plus, if appropriate, internet access software is likely to be required.

There is no requirement to cost up the designed network, or to worry about a budget, for the purposes of the portfolio, though this may be a real client requirement.

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 obtain 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 to justify 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 or to network requirements.

The Computer hardware required here is a list of all equipment required 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 requirements.

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

Applications software could cover generic packages or any specific or bespoke software requirements. As 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 only used the Internet for their research. If books or other sources were used, it was rare to see any explanation as to why though this is required to obtain the highest mark on the row.

Row 7 –The implementation schedule is for setting up and installing the specified network from AO2 and AO3 – a logical order of tasks should be provided that can be used as a checklist. Estimates would be expected to be in hours (if sub tasks are grouped) or even minutes here for the smaller sub tasks such as making a connection. Few candidates scored high marks on this row.

A04 – Evaluation

Row 1 – Evidence for this row came from the time plan (if it had a monitoring column), a progress diary, the implementation narrative, and the narrative and evaluation towards the end of the portfolio. Most candidates could score 1 mark here. If this evaluation is on-going, then

there should be evidence that steps have been taken to make changes. Very few candidates were able to “critically” review their actions, giving 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. Start and end dates do not show whether the candidate actually understands how long it will take them to carry out a task.

Row 3 – Some candidates had monitoring comments on the time plan, or a diary, which was backed up by witness statements.

Row 4 – There was very little evidence of testing of the network – for example, simple ping testing, printer test pages. In some cases, however, testing of the specification was evident, by taking it back to the client, or checking that the network once set up worked for the client. Having a good and detailed test plan (assessed on the next row) enabled 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, following on from the list of client needs. The test plan is associated with this. The test plan needs to give every step required, checking that each client 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.

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 ‘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.