

Principal Examiner Feedback

Summer 2010

Applied GCE

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Information and Communication Technology (6959)

Paper 01 - Communications and Networks

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General Comments

This was the first time work was assessed on the updated version of the specification.

There is no need for centres to send research material to the examiner, such material must be kept securely at the centre until after the results have been published.

Most centres adhered to the ICE document guidelines which prevents access to the Internet and any electronic storage during the question response session, but there were several instances of text and a few diagrams which appeared to come from Wikipedia, and other web sites. The verbatim nature of the text raises the question of supervision standards and whether or not text answers had been literally copied and pasted.

The case study is released well before the examination but a disappointingly large number of candidates seemed to be unaware of essential parts of the content. e.g. The requirement for a copper cable and WiFi solution was explicitly mentioned, yet some candidates insisted on having fibre optic components.

QWC

This was assessed for the first time under the updated specification, The majority of centres commented on QWC on the e-sheet and used the criteria correctly. However some misunderstanding was evident in a few cases.

The rules for QWC are as follows:

- The content of the work is marked, identifying the band and the mark that the work is worth.
- The QWC is assessed and the mark is then adjusted, within the band, to give a final mark.
- The content mark cannot be increased on the basis of QWC.
- If the content mark awarded is at the bottom of a band, the student's mark cannot be reduced further.
- QWC should not be assessed elsewhere in the unit.

Activity 1 - Network Management

- A set of instructions for the management staff to follow.
- Brief notes for Viro about preventing data recovery.

This was the Quality of Written Communication (QWC) activity.

It should be noted that in future examinations, answering questions in the context of the case study will be important, especially in the QWC activity.

Although the old network server was specified to be NT4 in the case study, very few candidates made any attempt to allow for this in their answers. Most candidates used search / backup routines suitable for XP / Vista workstations, with no mention at all of a server.

In the second part of the activity, too many candidates opted for a simple, and insecure, format the drive or reload Windows solution.

Stronger candidates were able to suggest more permanent methods of destroying data, or at least discussed the limitations of formatting.

Activity 2 - Network connectivity

- Notes for Viro about dBi, dBm, and mW.
- Notes and diagrams about WiFi antenna.
- Notes on **three** factors, other than antenna type, which would impact on the communication range in this scenario.

This was specifically flagged as a research question. It should be noted that research activities will be required in future examinations. Such research is designed to make the examination more of a 'practical activity' and will involve more than simply looking up prices and specifications of standard network equipment.

A large number of candidates seemed to use the same source of information about dBi, dBm, and mW. It seems clear that despite having the opportunity for research, the majority of candidates had simply found a web site that dealt with the subject and copied the content.

There was little or no attempt to put the information into simpler language or explain how anything worked in a form that Viro might have understood.

In part (b) there was a lot of confusion over the terms Dipole and Omnidirectional, with many candidates using them interchangeably. Where markers could clearly see from the diagram which type was being written about, marks were awarded based on the text. This was not always possible and some candidates failed to gain marks,

It was clear that a few candidates had used diagrams from web sites rather than drawing their own. This raises the question of supervision standards and whether or not text answers have been copied and pasted as well

Most candidates had some sensible ideas for part (c) but many did not write answers in the context of the scenario.

Activity 3 - Components of a network.

- A table which identifies the hardware for one cabin.
- State how items are robust, intuitive and visually appealing.
- A table which identifies the hardware for one island.
- A table which identifies other hardware required.

This was a question where many candidates achieved a high mark. All candidates could correctly identify several relevant components for the network although too many failed to gain marks through not having enough of particular items.

Weaknesses were:

- not appreciating the need for cabin hardware to be 'guest-proof'. e.g, having PCs / games consoles hidden away / built in, rather than being accessible / movable by guests. Not using laptops, wireless keyboards, or other items that could be removed from the cabins.
- not answering the question in part (b). This specifically referred to items used by guests. Large numbers of candidates explained how items such as CAT5 cable or routers were robust and reliable.

Activity 4 - Network design.

- A design for the network with notes justifying each major decision about positioning of network devices and about WiFi links and coverage.

Most diagrams were clear and well labelled, although nearly all candidates failed to gain marks by not identifying cable types. There were still instances of servers being used as hubs and equipment was not always placed in the specified locations.

The activity had a specific note about the design being modular and stated exactly which parts needed to be shown.

Despite this advice, far too many candidates tried to put the complete network onto a single sheet of A4, with predictable results.

As in previous examinations, the notes justifying each major decision frequently ended up being notes describing the layout or notes repeating what the case study said should be done.

The notes for part (b) were supposed to be 'regarding the positioning of network devices'. Very few candidates seem to have read that sentence.

The notes for part (c) were supposed to be about the WiFi provision. Long range WiFi was an important part of the scenario and should have been researched in activity 2. Many candidates seemed to have forgotten that research.

Activity 5 - Network addressing and protocols.

- Notes for Viro on Class C, static / dynamic, reservations and scopes.
- An IP scheme with justifications.

Breaking part (a) into four parts seems to have helped the weaker candidates. The main problems were failing to answer in terms of the scenario and not making the notes simple enough for Viro to understand.

In part (b) far too many candidates simply listed IP addresses for devices with no reasons being given.

Standard Ways of Working

Most candidates gained both marks. Only a very few candidates failed to gain one mark by putting work in the wrong order or including extra pages. This continues the improvement seen in the January examination.

Before every examination series an 'Instruction for the conduct of examination' document is published on the Edexcel website. This document gives guidance to centres about the location of datafiles and the conduct of exams. Centres must read this document before the examination window.

Unit Results

Grade	Maximum Mark	A	B	C	D	E	N
Boundary Mark	90	61	53	45	37	30	23
Max Uniform Mark	100	80	70	60	50	40	0-39

Candidates who do not achieve the standard required for a grade E will receive a uniform mark in the range of 0-39.

Note

Grade boundaries may vary from year to year and from subject to subject.

Qualification Results

Advanced Subsidiary (Single Award)

The minimum uniform marks required for each grade:

Qualification Grade	A	B	C	D	E
Maximum Uniform Mark = 300	240	210	180	150	120

Candidates who do not achieve the standard required for a grade E will receive a uniform mark in the range of 0-119.

Advanced GCE (Single Award)

The minimum uniform marks required for each grade:

Qualification Grade	A	B	C	D	E
Maximum Uniform Mark = 600	480	420	360	300	240

Candidates who do not achieve the standard required for a grade E will receive a uniform mark in the range of 0-239.

Advanced Subsidiary (Double Award)

The minimum uniform marks required for each grade:

Qualification Grade	AA	AB	BB	BC	CC	CD	DD	DE	EE
Maximum Uniform Mark = 600	480	450	420	390	360	330	300	270	240

Candidates who do not achieve the standard required for a grade EE will receive a uniform mark in the range of 0-239.

Advanced GCE with Advanced Subsidiary (Additional)

The minimum uniform marks required for each grade:

Qualification Grade	AA	AB	BB	BC	CC	CD	DD	DE	EE
Maximum Uniform Mark = 900	720	690	630	600	540	510	450	420	360

Candidates who do not achieve the standard required for a grade EE will receive a uniform mark in the range of 0-359.

Advanced GCE (Double Award)

The minimum uniform marks required for each grade:

Qualification Grade	AA	AB	BB	BC	CC	CD	DD	DE	EE
Maximum Uniform Mark = 1200	960	900	840	780	720	660	600	540	480

Candidates who do not achieve the standard required for a grade EE will receive a uniform mark in the range of 0-479

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