Examiner's Report

January 2010

GCE Applied ICT 6959 Paper 01

Communications and Networks

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Overall Comments

Important information

This specification has been updated and ALL candidates will be assessed on the updated version from SUMMER 2010. This version which has a blue cover and has been sent out to centres, many centres have attended the free inset sessions.

Examined Units

It was clear from the candidates' answers that centres are using past papers to prepare candidates for the examination. This is good practice, however the candidates still need to look carefully at the question or task set, there are variations from one series to another, and candidates need to be prepared to carry out tasks from any area of the unit specification.

Unit 9: Communications and Networks(6959)

General Comments

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 essential parts of the content. Items which were specifically mentioned, e.g. special effects and RFID equipment being part of the network, were ignored and marks were lost because of that.

Comments on individual questions:

Activity 1 – Network architecture and topology

Notes for Christopher which describe topologies, connection methods and network architectures.
Most candidates were able to score well in the first part of this task. Most candidates were able to write at least generic notes about all three. However, the notes should have been written in the context of the LARP scenario, too many candidates ignored this to the extent that the scenario was not even mentioned. These candidates lost marks.

The question asked for appropriate diagrams, these were relatively scarce, and in many cases absent. The most common ones were mesh and star topologies. Better answers included architecture diagrams as well.

The question specifically stated that the network must be reliable, easy to maintain, robust and value for money. These factors were only addressed by a minority of candidates.

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

Activity 2 – Network connectivity and security

A document for Sarah which describes network security methods.
A large number of candidates seemed to use the same source of information about WEP and WAP. 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 Sarah might have understood.

The similarity of answers raises the question of supervision standards and whether or not text answers have been literally copied and pasted.

Activity 3 – Components of a network

a. Produce a table which identifies the hardware and cabling, states and justifies the quantities, gives a reason and cost for each component, and shows the total cost of the design.

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 lost marks through not having enough of particular items. Access point and cable were frequently under the amount needed.
Prices were usually sensible, the total was nearly always given and was usually below the given budget.
Too many candidates wasted time and effort in researching and describing components that had been specified in the question as being provided by another company, e.g. the server and RFID devices.

It should be noted that in future examinations, the research of information in the context of the case study will be important.

b. A document explaining the network will be made fault tolerant and reliable.

Many candidates attempted this but few did it well. The budget was often left out and the specific requirement to address the failure of a WAP and a cable was often ignored.

Too many candidates went down entirely the wrong track, concentrating on security and the problems associated with Internet access, as if the network were a SOHO system.

Activity 4 – Network design

A design for the network with notes justifying each major decision.

Most diagrams were clear and well labelled, although nearly all candidates lost marks by not identifying cable types. There were fewer instances of servers being used as hubs and equipment was usually placed in sensible locations.

The majority of candidates were over optimistic in the their assumptions about the performance of WAPs. The castle towers are shown on the map to have walls about a metre thick and some of the locations were underground cellars.

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.

Activity 5 – Network management

A poster with fault finding flowcharts, suitable for staff who are not I.T. specialists. There were several excellent posters, showing clear, logical fault finding procedures. Unfortunately there were also a large number of posters which were difficult to follow and which failed to address the brief.

Common mistakes were expecting staff to e.g. leave their posts and go off to the control room, reconfigure WAPs and switches with new network settings, and send the equipment back to the manufacturer for replacement.
There were also a sizeable number of candidates who did flowcharts for one pack / all packs, instead of one component (headset, gloves, goggles) in a pack / all components in a pack.

Standard Ways of Working

Most candidates gained both marks. Only a very few candidates lost one mark by putting work in the wrong order or including extra pages. This is a great improvement on previous examinations.

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 data files and the conduct of exams. Centres must read this document before the examination window.

Issue 2 of the specification and sample assessment materials have now been released. Centres should be aware that the new specification will be examined in May 2010.

Grade Boundary January 2010

6959	Total	A	B	C	D	E
Raw Mark	90	59	51	43	35	27
UMS	100	80	70	60	50	40