OCR
RECOGNISING ACHIEVEMENT

GCE

Information & Communication Technology

Advanced GCE **A2 7838**

Advanced Subsidiary GCE **AS 3838**

Reports for the Units

January 2009

3838/7838/MS/R/09J

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This report on the Examination provides information on the performance of candidates which it is hoped will be useful to teachers in their preparation of candidates for future examinations. It is intended to be constructive and informative and to promote better understanding of the syllabus content, of the operation of the scheme of assessment and of the application of assessment criteria.

Reports should be read in conjunction with the published question papers and mark schemes for the Examination.

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Advanced Subsidiary GCE Information and Communication Technology (3838)

REPORTS ON THE UNITS

Chief Examiner's Report

Numbers for the AS units 2512 and 2514 were understandably lower this year than previous years as this is the last year that these units will be examined. Centres are reminded that these units will be examined only once more in the summer of 2009. This is the last year for teaching 2515, 2516 and 2517. In general the small number of candidates entered for 2516 and 2517 appeared well prepared and performed reasonably well, however for 2515 the general understanding of the technical aspects of the specification were poorly understood and it was apparent that some candidates had been entered without studying all parts of the specification. Many questions in the ICT specification require straight forward definitions or lists of characteristics for answers and in many cases the appropriate learning had not taken place, thus disadvantaging the candidate. It is imperative for examinations of this nature that definitions are learned and that a technique for adequately answering the discussion questions is mastered. Past examination questions and published mark schemes are the way forward for the latter point.

2512 Information, Systems and Communications

General Comments

The use of appropriate technical language was in evidence yet the more technical aspects of the specification were not particularly well known.

Clearly some topics are not being covered adequately by centres. Evidence of having been instructed on the interpretation of keywords was not always to be found in the answers.

Many of the responses given by candidates had not advanced from foundation GCSE – there was no depth to knowledge or understanding and the phraseology used was not of the quality or level required.

If the response cannot be read, it cannot be marked. There was a disappointing increase in the poor handwriting from candidates.

Comments on Individual Questions

Question 1

a) Generally well answered with the majority of candidates scoring full marks. Some candidates confused real and integer.

b) Candidates were able to give the identification but a large proportion were unable to expand on their answer.

c) Whilst candidates seemed to be aware of the lack of truncation leading to increased record size, this was often coupled with a reduction in storage space used. There is a difference between less space used and less wasted space. Variable length records do not always lead to a decrease in storage space use. This minor, but important difference leads to differentiation between candidates.

d) Many candidates talked about being able to create forms, reports and queries, which of course can also be done in a flat file database. There were few candidates who read the question carefully and gave the advantages rather than a description of.

Question 2

a) (i) The majority of candidates were able to score some marks on this questions. Those that did not tended to merely write ALU out in full.

(ii) Very few candidates were aware of the purpose of the control unit and scored poorly on this question.

b) This was a similar question to previous papers and it was disappointing to see that candidates had rote learnt the response. The previous question was hardware upgrades, this was software. Those that did give software upgrades found it difficult to give a reason as to why it improved performance.

c) Generally answered well, although some candidates did give proprietary software names rather than the software type or a generic name.

Question 3

a) This was a question that revealed that the majority of candidates had a basic knowledge but did not understand the topic in depth. Most gained half marks.

b) Many candidates didn't read the question and gave a description of what the interfaces were rather than giving examples. Often, the examples given were not appropriate or relevant.

c) The questions ask for items in addition to the user guide – therefore giving user guide or help guide cannot gain marks.

d) (i) There was a lack of detail given in the candidates' responses that mean that they lost marks. A questionnaire can be direct or indirect – more information is required.

(ii) Many candidates gave methods of giving information to customers rather than representation methods – a lot of answers related to email and bulletin boards rather than the method of representation used within them.

e) Some candidates drew the standard diagram but failed to apply the context of the question to this so couldn't gain marks. Those that read the question performed reasonably well.

Question 4

Some candidates gave examples of different types of queries instead of methods of file access. The reason was often superficial and repeated the question.

Question 5

a) This was very well answered by the majority of candidates. Those that failed to achieve full marks repeated the question and "connect".

b) Few candidates knew what the purpose of a switch was. It was disappointing to see a large proportion of candidates giving answers to do with on and off.

c) This was quite a straight forward question and candidates who saw that it was a 'compare' question were able to gain the marks with ease; however, some candidates failed to talk about both interface cards in each answer. A lot of responses merely gave information on the cabled or the wireless but did not compare both. A disappointing number of responses seemed to be unaware of any distance limitations on wireless cards.

d) The majority of candidates knew the definition of bandwidth, although some answers still related to speed rather than amount of data. Not many candidates were able to get the second mark for explaining the importance of bandwidth.

Question 6

a) If candidates saw that this was a 'compare' question they were able to get some of the marks here. Not many gained all 3 marks, with quite a lot of answers about email being faster or fax needing paper. Candidates generally did not have a good understanding of what a fax is, compared to email and their answers lacked the comparison and depth required.

b) This was very well answered with the majority of candidates gaining most of the marks.

Question 7

a) The majority of answers were giving the principles of the Act rather than applying that knowledge to give the implications to the business; the more able candidates did mention the need to employ a data controller or costs to the company. Answers were generally rote learnt responses rather than application of knowledge.

b) Most answers said that this Act prevented people from using a computer for unauthorised or illegal activities; very few gave good answers about the act being a deterrent not a prevention method.

Question 8

The majority of candidates gained high marks on this question and had an understanding of the purpose of the BCS. There are a number of candidates who still seem to be of the opinion that the BCS will come out and fix computers or offer a help line for network managers.

Question 9

a) Most candidates knew what one role of the user ID was but had difficulty with the second. A common miss-held idea was that it is to do with security

b) A frequent response from candidates involved them repeating the question. Very few candidates knew of another role of a password.

c) Some candidates again failed to read the question carefully and gave physical security methods rather than methods that would prevent remote access. Some good answers about firewalls and access rights were given.

Question 10

In the last report it was written that:

> "This type of question is now common as the final question on the paper. It was hoped that over time candidates would understand the requirements of a discuss essay however this has not proved to be so. Whilst most candidates realise that 'discuss' questions necessitate at least two viewpoints, nearly all responses were a succession of identified impacts. Few candidates were able to expand upon these impacts and develop an answer that included a progressive explanation of just why they were advantageous or disadvantageous to the individuals in question.
>
> Discussions with very little substance left no reference material upon which to base a satisfactory conclusion. The resultant weak ending was, too often, not worthy of an award."

There has been no discernable change in the responses from the candidates and the above comments still apply.

2514 Practical Applications of ICT Using Standard/Generic Applications Software

General Comments

This is a scenario-based paper and as such candidates should give examples, when asked for, in the context of the scenario. In some cases it was evident that the candidates had some knowledge but were unable to apply this knowledge to the context of the questions. Failure to do this leads to candidates failing to be awarded marks for examples. Some candidates, particularly the weaker ones, are still using terms such as 'professional' without any explanation or qualification in an attempt to cover any aspect of using ICT correctly.

The examination technique of many candidates hindered their ability to score marks – centres must practise examination technique and assist the candidates to understand what is required by the command words such as discuss, explain, describe, state and how..

There appears to be a general lack of knowledge of technical terminology relating to applications. There is no doubt that candidates are able to manipulate applications in a practical manner but are unable to apply their practical skills in a theoretical situation.

It is important that all areas of the specification are covered to ensure that candidates have a wide range of knowledge.

Comments on Individual Questions

1 (a) Few candidates gained full marks for the question. Centres need to instruct candidates that describing features which are common in other software applications will not gain marks if they are required to give the benefits of a particular package. Many answers made reference to the use of wizards, templates, and general features which were not specific to DTP software.

(b) This question was relatively well answered although some candidates failed to gain half the marks because they often repeated the point about 'recognition' of the logo. However, most candidates referred to 'the company' rather than the village show.

(c) This question was well answered with many candidates gaining more than half the marks. Many candidates were able to describe how frames could be used to move, resize and rotate the text and images. Some candidates however, seemed to confuse frames with borders.

(d) This question was relatively well answered with many candidates gaining at least half the marks. However, some candidates struggled to use alternative words to describe 'rotate' and 'flip' without repeating the key word in their answer, which gained no marks.

(e) This question was relatively well answered although some candidates struggled to express their point clearly and often repeated the same point using different terminology. Many candidates only recognised two stages in the process. As this question could be answered from theoretical knowledge the performance of some candidates was a little worrying. Some candidates used brand names in their answers so limiting the marks they could be awarded.

2 (a) Generally this was well answered, with many candidates gaining more than half marks. The candidates who gained full marks probably did so as a result of their familiarity with using presentation software.

(b) Few candidates gained full marks for this question. Too often the candidates repeated features of 'a consistent layout' which had already been given in the question. They were required to give two other benefits which were <u>not</u> features of a consistent layout. Some candidates gave responses which related to 'saving time' or 'changing the layout' which gained no marks.

(c) Few candidates gained full marks for this question. Animation was often described adequately by candidates to enable them to gain the marks. However, Hotspots were not described so well, with some candidates offering no response to this question. Too often the candidates gave generic examples which were not relevant to the scenario which gained no marks.

(d) Many candidates gained high marks for this question probably as a result of their familiarity with using the manual and automatic transition features in presentation software. Some candidates offered both options as possible solutions to the task and were able to justify their preference for the scenario.

3 (a) Generally this was well answered, with many candidates gaining more than half marks. Candidates often described and gave relevant examples of 'workbooks' better than they did for 'ranges'.

(b) Few candidates gained full marks for this question. Some gave answers which referred to validation or verification techniques which failed to meet the marking criteria. This type of question has appeared on previous examination papers and yet candidates still fail to demonstrate their understanding of form controls.

(c) Most candidates gained full marks for this question – correctly identifying the most suitable type of chart. This type of question has appeared on previous examination papers.

4 (a) This question was well answered with many candidates gaining at least half the marks. However some candidates offered no response to this question while others gave a 'text book' word perfect answer. The principles covered in this question have appeared on many previous papers and are an essential part of understanding database concepts.

(b) This question was poorly answered. Many candidates failed to understand the concept of the question and instead they described the features of data-entry screens. Few candidates understood what this question was asking of them and this was evident from the standard of the written response. Many candidates failed to gain the first marking point and for many there appeared to be a lack of understanding in relation to the question.

5 This question was well answered with many candidates gaining more than half the marks. However, some candidates offered responses which were clearly describing the principles of making purchases via ecommerce which gained no marks. The standard of the written response in the form of an essay style reply appeared to be better than on previous papers with fewer students attempting to gain marks for simply listing features using bullet points.

2515 Communications Technology and its Application

General Comments

The overall performance of the candidates seems similar to previous examinations held at this time; with few exceptions, many candidates seemed ill prepared for this paper.

The requisite technical vocabulary clearly appears in the specification and centres should ensure that candidates are familiar with the terms used and are able to use them appropriately.

The tendency of some candidates to write nothing on questions is an issue that seems to have been tackled by the vast majority of centres. However, a significant number frequently ignored, or misread, the questions' wording. These approaches are unlikely to gain a mark that takes a candidate beyond the threshold of a pass.

Evidence of having been instructed on the interpretation of keywords was again apparent. Given that marks are awarded for the content and structure of answers, candidates seemed more able to consider how their responses would take shape given the context of the question. Centres that prepare their candidates appropriately in this way are to be congratulated.

Centres should remind candidates that it is difficult to award marks when handwriting is illegible.

Comments on Individual Questions

Question 1

a) The specification deals with 'the significant improvements in quality of services built around modern communications technology'. It was hoped that many candidates would be able to describe infrastructure, data transport and facilities rather than giving a description of networking hardware or topologies. With consideration, far more candidates could have availed themselves of the available marks.

b) (i) Many candidates obviously had experience of test plans and testing. However, few were able to describe how a test plan facilitates testing. 'Tests on the system' seemed to be a standard answer, where an inability to relate a suitable response was apparent.

(ii) Similarly, the ability to relate how validation routines achieve their objective was not very well related. Too many candidates, even at this stage of their course, are still under the impression that validation ensures data is totally correct.

Question 2

a) (i) This part question was very well answered by the majority of candidates. A firm grasp of the purpose of a network interface card was well documented and eloquently relayed.

(ii) Similarly, the purpose of a repeater was understood by many candidates who were able to give exemplary descriptions.

(iii) However, gateways proved problematic for some. Too often, the purposes of a gateway were mistakenly interpreted as the purposes of a bridge.

b) Candidates' descriptions of protocols often bordered on textbook quality, something centres should be congratulated upon. Imparting how technological responses should read to the examiner is not an easy task.

c) Many candidates extolled the virtues of layered interfaces, focussing on the OSI model, with many detailing by name the seven layers. However, only a minority of candidates successfully read the question, related the benefits of layered interfaces in a school based environment and actually gained marks.

d) Pleasingly, many candidates gained marks for appropriate applications of optical communications and in so naming these applications, via a mental prompt, were able to accurately relate the description to their own experiences within a school.

Question 3

a) Far too many candidates wrote answers that did not relate to the context of the question. Much confusion was apparent between a learning outcome dealing with mobile communications and a different learning outcome dealing with satellite communications. Those that did read the question accurately and recognise what was required frequently ceased to gain any more marks after their descriptions stopped at the allocation of transmission frequencies. Candidates should be encouraged to think beyond their own experiences and investigate the remaining communications stages, especially given that the recipient of the call would be outside of the UK.

b) A high percentage of candidates gained the majority of available marks. Very few were unable to at least name three different methods of database distribution. Given that a candidate would have limited experience to relate a description to, this part of the specification has obviously been well taught by centres.

c) Many candidates scored at least three of the available marks for identifying security threats. Surprisingly, fewer candidates were able to extend their answers into a description of why they were a threat to distributed databases.

Question 4

a) A good number of candidates were able to identify features of an open network. Descriptions of purpose were limited to those candidates who had grasped an appreciation of the context in which this open network would be used.

b) (i) Descriptions of what usernames are were commonplace. Responses which fully described how they could help to manitain the confidentiality of data were more of a rarity.

(ii) Very generalised answers indicated that candidates knew of the existence of firewalls; few could describe how they contributed to manitaining the confidentiality of data.

(iii) Candidates were well able to describe how audit controls could be used to track misuse, by whom, where and when. Personal experience, perhaps.

Question 5

a) Candidates, in general, related their experiences of ADSL through accurate choices of topics to compare. To gain marks though, candidates must avoid '...and the other is not' type answers for the second half of the comparison. The qualities of a dial-up connection

were not related particularly well. A sign of changing times perhaps, but a specification requirement nonetheless.

b) The specifics of GUIs were not always referenced in candidates' responses which resulted in answers that were too vague. 'User friendly' is a term widely used but infrequently qualified in a 'describe' question of this nature.

c) (i) and (ii) Pleasingly, not only were candidates able to draw upon knowledge from the AS module and consider appropriate input and output devices, but many were fully able to describe purposes for their chosen examples, often gaining the maximum marks available.

d) Here, many responses were given that did not fully address the question. Many understood that encryption, in some way, renders data unintelligible. Few candidates were then able to, logically, describe why this was undertaken and in so doing limited themselves to single marks.

e) The question clearly asks for a description of the limitations of interactive television. However, far too many candidates gave responses that concentrated on available facilities or the social implications of interactive television. Too few candidates gained marks for actually considering the limitations of interaction itself.

f) Many candidates are now reasonably well versed in the construction of 'discuss' questions. The facilities to discuss were chosen accurately and many had the ability to detail the impacts, for the customer, of their use. Sadly, too many candidates are unable to extend their responses and deal with the subsequent consequences of using these facilities and fewer still are able to examine their use from either a positive or a negative viewpoint. The impacts and consequences of both viewpoints were rarely evident and marks given in the high banding were almost unseen.

2517 Systems and Systems Management

The small number of candidates taking the examination this session seemed generally well prepared. As usual there were a number who seemed to have been entered without completing the full specification and this was noticeable in some answers. Candidates entered for this examination should have studied the full specification and revised the work learned for the AS units.

Question 1(b)
Most candidates scored full marks, though a few lost out by using proprietary names.

Question 1(c)
Most candidates were able to gain marks for template and macro although for full marks the purpose was required, not just a description.

Question 1(d)
Many candidates were able to distinguish between short-term and long-term planning, but not many were able to give pertinent examples based on the scenario.

Question 2(a)
Generally this question was well answered with the difference between data and information being well known. However, not so many candidates were able to describe the role of data and information with relation to the scenario.

Question 2(b)
Most candidates were able to score marks describing a stock processing system.

Question 2(c)
A number of answers referred back to the stock taking system and failed to use the warehouse as a point of reference in this answer.

Question 5(a)
This question was generally well answered, with most candidates gaining at least half marks.

Question 5(b)
This question was generally well answered, though some candidates were unable to detail enough measures to score full marks.

Question 6(a)
This question was generally well answered, with change management being well understood by the majority of candidates.

Question 6(b)
This was the second discussion question on the paper. Candidates had many good and interesting ideas, but these were often not developed beyond the descriptive phase. When consequences were mentioned they were often muted asides concerning “quicker”, “more efficient” and so on rather than the indepth discussion required. Four main descriptive points were required by the question and the examination of the negative and positive consequence of all or even some of these would have led the candidate to the higher mark bands.

Grade Thresholds

Advanced GCE ICT (3838/7838)
January 2009 Examination Series

Unit Threshold Marks

Unit		Maximum Mark	A	B	C	D	E	U
2512	Raw	90	59	52	46	40	34	0
	UMS	90	72	62	54	45	36	0
2514	Raw	90	59	52	45	39	33	0
	UMS	90	72	62	54	45	36	0
2515	Raw	90	49	43	37	31	26	0
	UMS	90	72	62	54	45	36	0
2516	Raw	120	100	88	76	65	54	0
	UMS	120	96	84	72	60	48	0
2517	Raw	90	59	54	49	44	39	0
	UMS	90	72	62	54	45	36	0

Specification Aggregation Results

Overall threshold marks in UMS (ie after conversion of raw marks to uniform marks)

	Maximum Mark	A	B	C	D	E	U
3838	300	240	210	180	150	120	0
7838	600	480	420	360	300	240	0

The cumulative percentage of candidates awarded each grade was as follows:

	A	B	C	D	E	U	Total Number of Candidates
3838	9.1	27.9	55.8	77.0	97.0	100	331
7838	6.4	25.5	61.7	91.5	97.9	100	47

For a description of how UMS marks are calculated see;

Statistics are correct at the time of publication

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