OCR
RECOGNISING ACHIEVEMENT

GCE

Information & Communication Technology

Advanced GCE **A2 7838**

Advanced Subsidiary GCE **AS 3838**

Report on the Units

January 2007

3838/7838/MS/R/07J

Oxford Cambridge and RSA Examinations

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All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

The reports on the Examinations provide 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.

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Chief Examiner's Report 7838

General Comments

The AS candidates for 2512 are often well prepared for this examination but it is probably too early for candidates for 2514 to be entered unless they are re-sitting or have been carefully prepared. Many candidates sat the examination this January apparently not having completed the syllabus. In questions where standard definitions have to be learned far too many candidates are trying to invent an explanation on the spot or answering as a "man in the street" with non-technical language instead of using standard definitions. This is particularly noticeable in 2514 and 2515 where many questions require straight-forward book-learned answers. Questions continue to be misread, notably in one question in 2517 where the advantages and disadvantages to the company of working from home were required, most candidates wrote about the advantages and disadvantages for the individual, the family or even the planet but not about the company.

The standard of handwriting was very bad in some cases and candidates might be inadvertently penalised if the examiner cannot read the writing. Candidates should take care to express themselves carefully and to check that their answers do not contain repetitions and inconsistencies.

Practical work continues to be presented extremely well, though attention to detail, such as using authentic clients and client correspondence would enhance the projects further.

As always the teacher is urged to provide the candidates with past question papers and mark schemes as appropriate as this is often the best preparation for recognising exactly what the examiner requires from expressions like features and characteristics, discussions and explanations.

2512 Information Systems and Communications

General Comments

The overall performance of the candidates seems better than in previous examinations. Most candidates were appropriately prepared for this examination. It was evident that some candidates had learnt sections of the theory by heart.

As with previous sessions, the use of requisite language was well documented yet the more technical aspects of the specification, such as networking and fixed and variable length records, were not particularly well known.

There were few candidates who wrote nothing on questions. However, a significant number of candidates frequently ignored, or misread, the questions' wording to their detriment. Another significant problem was a failure to read, and implement, the instructions on the paper's cover sheet.

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

Comments on Individual Questions

1.

a) Generally well answered, but some candidates were unable to provide an example for a second mark.

b) A well answered question with many candidates scoring full marks.

c) (i) and (ii) Most candidates knew what was meant by syntax. Many answers, however, confused syntax and semantics resulting in an example that quoted verbatim from published materials but which sadly gained no award.

d) A well answered question, with a range of organisations that would want to buy the information being prevalent. A valid example of how they would realistically utilise the information is, perhaps, a point for consideration.

2.

a) Some very good answers gaining full marks for those who had learnt how to write economical yet accurate 'comparison' answers. It was again disappointing that many candidates are unaware that a comparison requires both sides, just saying one side and allowing the examiner to make the association by implication is not worthy of a second mark.

b) (i) The concept of a unique identifier was within the scope of most candidates. Just what it uniquely identified evaded many for the second mark.

(ii) Over complicated answers often limited the marks. Whilst the nomenclature had been grasped by the majority, a full description was less commonplace.

(iii) Statements rather than a description of function limited candidates in many cases to single marks.

c) (i) 'data is correct' rather than 'has been entered correctly' still seems to be a popular misconception when describing verification.

(ii) Well answered for the first mark, with many candidates taking a reference from the question when doubt lingered.

(iii) A well learnt part of the specification, with few candidates failing to score any marks. Those that did confused validation and verification or gave the example used in the question.

3. This was often well answered, but there were many variations on the actual names of the input devices. Many candidates went on to attempt a description of the use of the device.

4.

a) (i) Many candidates meandered around an answer without actually giving a description of what utility software is, or does.

(ii) Much better answered than (i), where many candidates used 'anti-virus' as the type of utility, finding ease in stating its purpose, probably due to their own familiarity with this particular utility. It was disappointing to see a large number of candidates still giving proprietary software names.

b) Many candidates confused self documenting software with the next section in the text book which describes supplementary user documentation.

5.

a) Generally a well answered question. Where candidates failed to score marks, the common mistake was to omit 'at a time'.

b) Most candidates managed the first characteristic of the three asked for, sometimes confusing 'many programs' with 'many users'. Only a few candidates gave valid answers for the other two characteristics of multi-tasking operating systems, repeating previous answers but using different wording.

6.

a) Candidates often gave the advantages of a LAN rather than the features. Where candidates identified that cables were used, few went on to say that they were owned by the company or organisation, meaning one of the most popular answers did not gain any award.

b) The correct identification of three advantages gave many candidates three marks. The ability to expand upon these, specifically to the employees, was not as apparent.

c) (i) It is clear that candidates know what bandwidth is. However, being able to adequately describe the effects of not having a high bandwidth eluded a vast majority. Further consideration of keywords would aid preparation for the examination.

(ii) Too often, candidates gave a description of how a modem worked. As there was no mention of this particular piece of hardware in the question, it would seem that candidates presumed an answer rather than read the question.

d) (i) Two components were often identified for both marks.

(ii) Often, an inability to accurately describe an expert system and its functioning in any depth suggested rote learning of the answers submitted in (i).

7.

a) (i) Identifying any algorithm, let alone describing how it worked, proved to be beyond most candidates, despite the detail contained within the question.

(ii) Though rare, candidates that gave successful answers in (i) were able to comfortably gain the mark here, confident in their grasp of the subject knowledge. Since the question asked for two numbers that would cause a collision – the numbers had to be seven digits long. If no answer was given for (i) then no marks could be awarded for (ii).

b) Despite a lack of adequacy shown in (i) and (ii), many candidates gained this mark, though often answers were restricted to 'next available space', showing no real mastery of alternatives.

8.

a) Candidates were able to communicate an awareness of these two devices. The requisite technical differences between the two were not articulated as well.

b) Hardware devices were identified by candidates with accuracy. Naming accompanying software proved more problematic. Many candidates realised an operating system would be needed, but few considered that a network was being created. It is disappointing that some candidates are not aware of the difference between software and hardware and confused their examples.

9.

a) Whilst accepting that candidates may not have full experience of a code of conduct in the workplace, responses over and above a suggestion of standards or what can and can't be done were rare. Many vague answers suggested that candidates are less acquainted with working practices than centres might expect.

b) The vast majority of candidates were able to identify a procedure and ably expand upon this to gain further marks. Whilst the encryption of data renders it unintelligible, a popular misconception amongst candidates is that it would also prevent theft.

c) Many candidates did not understand the purpose of this Act and either did not answer or gave answers relating to the investigation of insurance customers. In confusion, some candidates attempted to solicit marks by reference to the Data Protection Act or Computer Misuse Act.

10.

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 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. Many responses were alarmist and not realistically considered.

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.

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 are still using terms such as cheaper, professional and faster without any explanation or qualification.

The examination technique of many candidates hindered their ability to score marks and practising examination techniques will assist candidates in understanding what is required by the command words such as discuss, explain, describe, state and so on.

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.

There are still many candidates whose writing is difficult to interpret – this slows down the marking process considerably and candidates can often miss out on marks because the examiner cannot read the writing. Candidates should be encouraged to use legible handwriting in order to maximise their chances of earning marks.

Even though candidates were asked not to mention specific brands of software, many did. Many candidates seem to be under the impression that there is only one type of computer in existence with one operating system. 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) This part of the question related to standard features found in a word-processing package. Many candidates attempted to describe a paragraph rather than a paragraph style as required by the question. Very few candidates were able to clearly describe a section with some answers given that related to frames.

(b) Many candidates gave answers relating to borders in response to the part of this question requiring them to describe frames. Some candidates were able to describe a frame but did not relate their answers to desktop publishing. It was pleasing to see that many candidates were able to clearly describe the feature of grouping. A minority of candidates failed to score any marks for this part of the question.

(c) Very few candidates were able to describe the advantages and disadvantages of using wizards sufficiently well to gain more than 50% of the marks allocated. Many candidates simply provided generalised answers such as ‘professional’ and ‘step-by-step’ that gained no marks. No marks can be given for answers such as quicker, cheaper, and easier. If candidates use these terms then they must clearly express reasons why these might be appropriate answers.

(d) Many candidates confused templates and style sheets in their answers to this question. As such, many candidates failed to score marks.

(e) Most candidates scored 50% of the marks allocated to this question. They did not then provide answers that would enable them to be awarded the further marks for extra explanation. Some candidates provided answers relating to the time it takes

to load an image library and the amount of disk space that would be needed to store the image library.

(f) Many candidates were able to gain 1 mark for each feature required in this question. The features were poorly described by many of the candidates with often very vague answers with many simply using the feature given in the question as the descriptor in their answer. Those candidates who did score well on this question simply quoted phrases from the endorsed textbook.

(g) Most answers to this question were vague demonstrating very little ability to logically describe how files could be transferred. Most candidates answered this question in a non-technical way and, as such, failed to gain many marks.

(h) Few candidates provided answers which went beyond a brief explanation of 'company recognition by clients'. There appeared to be a general misunderstanding of the difference between a company house style and their corporate image.

2 (a) Most candidates gained 50% of the marks – usually by referring to calculations, graphs and predicting outcomes. Few candidates gained the further explanation marks. A minority of candidates failed to answer the question giving answers relating to modelling of objects.

(b) Most candidates were able to gain marks for their answers relating to formulae and functions. However, few candidates were able to correctly describe rules.

(c) Candidates lost marks on this question by providing examples of the use of ranges, workbooks and worksheets that did not relate to the scenario – Airport Cars.

(d) This question was generally well answered although a minority of candidates answered giving a list of possible graph types – examiners only marked the 1st answer given.

3 (a) A high proportion of the candidates failed to read the question properly, and did not explain the '*design* considerations of the data entry screen', describing instead either the actual data to be entered, the database structure to be used or what fields should be on the screen. Many provided vague answers about user friendly, passwords, security, colour blindness, what needs to be collected, enough boxes, quick data entry etc.

Those that did understand the focus of the question gained 4-6 marks. However, many candidates provided poor or no examples or simply repeated their answers e.g. use of list box/combo box/menu/option box.

(b) Queries, searches and reports were the most common answers with some fairly good answers in the context of the question. Very few students gave other answers.

4 (a) Many candidates were able to describe an advantage of using a template to create a presentation but the answers they gave for the disadvantages referred to the presentation looking the same as other companies.

(b) Many students gave answers that did not relate to the focus of the question, giving answers relating to the use of a master slide. Many answers related to sound, video and animation being used but few applied the examples they gave to Airport Cars. This strategy resulted in the loss of marks.

(c) Most students gained full marks with standard textbook answers.

5 Most candidates knew the difference between static and dynamic (part I) but many related their answers to CD's and the internet rather then to the question. Those candidates who attempted to relate their answers, for part (ii), to the scenario simply gave muddled answers relating to passengers arriving or leaving by taxi, private car or plane.

2515 Communications Technology & its Application

General Comments

The overall quality of the answers are disappointing, given that some of questions are straightforward, and have appeared in similar form in previous papers. One excellent way to revise for this examination is to use the past papers and mark schemes published by the Examination Board. Few candidates gave conclusions or recommendations and where they did, they were reiterating what had been said in the answer and so did not gain extra marks.

The standard of writing and expression remains generally poor.

Comments on Individual Questions

1.

(a) This was well answered though a number of candidates lost marks through giving incomplete or facile answers even though it seemed from the rest of the question that they probably knew the answers.

(b) This was generally well answered but few managed to gain full marks.

(c) Most candidates knew enough about firewall software to gain marks for this question.

(d) Generally well answered but again many candidates were unable to gain full marks.

(e) (i) Bandwidth is still not fully understood. Many answers incorrectly involved the concept of speed rather than capacity.

(ii) Most candidates were able to gain marks here, though often the language is not technical.

(iii) Those that knew the methods gained the marks. Many interesting ways to spell Hamming code.

2.

(a) Some sensible answers here. Some candidates lost marks by mentioning the same limitation, for instance lack of signal, three times but in different words.

(b) The steps by which a mobile phone user is able to contact Japan were not well known, though similar questions have appeared in the past. Few candidates managed to gain full marks.

3.

(a) Generally well answered though a few candidates thought a plotter was an input device.

(b) Packet switching and circuit switching were well understood. Many candidates scored full marks here.

4.

(a) In general candidates seemed to understand the concept of the distributed database but were unable to answer in any kind of technical way, most credit being gained from answers that could have come from someone who had never studied the specification.

(b) Question 4(a) asks about a database partitioned between sites. 4(b) has the entire database at each site. Many candidates were confused by the distinction between the two and carried on the answers from (a) into (b).

(c) Encryption was understood by most candidates, but authentication was not so well known.

5.

(a) The answers given to these questions did not reflect the fact that the candidates were almost certainly working on the project for 2516 at this stage. The answers to these questions should have been well known as the stages of the project already being attempted.

(b) Some good answers here, though some lost marks by limiting themselves to just one kind of feedback and giving many examples of it, or giving an example then not following it through for the next mark. This was a **discuss** question.

6.

(a) Many candidates gave good but incorrect answers because they did not read the question carefully. The question asked for the advantages and disadvantages to the company of working from home. The candidates almost invariably gave the advantages and disadvantages to the workforce.

(b) Generally badly answered, usually because the answers were trite or too brief to be meaningful within the context of the question.

2516 ICT Project

Understandably, the cohort for the January session was small. The size of the cohort means that there are a limited number of useful comments that can be made. However, the following are some observations that centres may find useful when it comes to submitting in the June session. The presentation of the work was excellent. The impression that this gives to the third party reader is that the candidates care about the work and are, in most cases, rightly proud of the work that they have done.

When the place of the client is taken seriously and the report becomes a report on a true collaboration, rather than the client being seen at the interview and then at the signing off and nowhere in between, the work benefits tremendously. If there is one place where many reports could be improved it is here. Candidates are not expected to take all the decisions. Rather, the role of candidates, in many cases, is to present the evidence in such a way that the client is able to make their own decision(s), which are then put into action by the candidate. It may be helpful to remember that the candidate is not going to be penalised because there is too much evidence of the client's involvement, but they will be penalised for too little.

Some of the acceptance letters could be more convincing. It is a shame that candidates who have spent a lot of time and effort on producing an impressive piece of work cannot have its final assessment in a form that does the report justice. It is accepted that there will often be cases where the client will not have headed notepaper in the realm of the problem solution. In this case school headed paper could be used for the user to write their comments.

These pieces of work are demonstrating a more thorough approach to interviews, however further work is required. An interview is required as the criteria clearly states that there is a single end user and the sensible way to collect information from a single person is to interview them. This insistence on an interview does not mean that other forms of information collection are not to be allowed, on the contrary, candidates who employ other methods should be given credit for doing so, however, only if the method is justified in their particular problem solution. At this level we assume that a candidate knows how to plan a questionnaire, the credit is for understanding the relevance of the methods.

The interview is particularly important and further improvements to approaching the interview could be made, including evidence of planning for the interview. The INSET meetings this year have included detailed discussion of the requirements, including the need for;

- well planned interviews with evidence of questions being planned
- alternative follow up questions which can be chosen according to the initial responses
- properly documented interviews, without appendices, and
- conclusions being drawn from the information collection which are signed off by the end user.

Candidates are advised to lay out alternative solutions in such a way as to be understandable by the client. If this is done properly it then becomes natural for the client to choose their own method by which the problem should be solved. On one level this is not necessary, but when we have a project which does not insist upon a full feasibility study, it is essential that the requirements of the organisation are met, and involving the client in these decisions is an ideal way of doing this.

It is important that the candidate realises that the high end skill throughout the work is 'justification' of the choices made. For example, rather than stating that the solution will require a 17" monitor, we want to know why we require a 17" monitor. It is advisable to remind candidates that this report is for their client, and if they expect a (probably) non computer literate person to sensibly sign things off, they need to provide the reasons for their decisions.

The actual development of the solutions was very good, almost all candidates were able to get at least part of the solution working. However, section c(ii) does need further work. At the higher levels, for instance, a candidate should not only be able to produce a training timetable for the staff who will be using the system, but would also be expected to go into some detail as to how the training will be carried out.

Once again, thank you to all these centres for the excellent way in which the work was presented. Please remember, if you are in any doubt about any aspect of the project work, you can contact the OCR Customer Contact centre who will direct your query in the appropriate direction.

2517 ICT Systems & Systems Management

General Comments

A general problem for this paper is the lack of concrete knowledge shown by many candidates. Many of the questions asked expected straight-forward answers, but many candidates appeared not to be in the possession of any standard definitions. For instance, decision making, strategic planning, project planning, prototyping, iteration and so on have standard answers repeated in examinations many times over the years as does the description of the Model Human Processor. One excellent way to revise for this examination is to use the past papers and mark schemes published by the Examination Board.

The standard of writing and expression remains generally poor.

Comments on Individual Questions

1.

(a) (i) This was well answered though a number of candidates scored no marks by using proprietary names.
(ii) This was well answered but few candidates were able to score all the marks, most limiting themselves to fairly trivial comments about the three packages mentioned in (i).
(iii) This was generally attempted for 1 mark though the standard expected answers relating to “accurate” and “up-to-date” were often missing.

(b) (i) Most candidates were able to name two methods of collecting information.
(ii) Generally well answered and within context.
(iii) Candidates found it hard to find sensible answers within context here, though many scored marks.

2.

(a) Some factors to be taken into consideration are mentioned in the specification such as budget and deadlines but these did not often appear in what were often rambling answers.

(b) Considering that the candidates should be well into their project at this stage this question was poorly answered. No link seemed to be made with the work being carried out for 2516 and this paper, although it is synoptic.

(c) (i) The description of prototyping is a standard answer and from this point of view was disappointingly answered.
(ii) Many candidates missed the fact that the question asked them to explain iteration and then to explain why it is used.
(iii) Those candidates that had studied the Model Human Processor were able to score marks. Many had no idea at all. The answer expected has appeared in many past answer schemes.
(iv) Generally well answered.

3.

(a) Surprisingly even at this level many candidates are muddled between validation and verification and few had learned standard definitions.

(b) Generally the description of verification was well answered but few candidates were able to score full marks for validation.

4.

(a) The specification asks candidates to explain the factors affecting decisions when upgrading software and includes staff, costs, benefits, current systems. Many candidates appeared never to have read this list and answered in a rambling fashion.

(b) Very well answered with many candidates gaining full marks.

(c) Changeover methods were well understood and full marks were achieved by candidates who were able to expand their answers sufficiently.

5.

(a) Reasonably well answered but the examples relating to the warehouse were not always given or sensible.

(b) Very few candidates were able to answer this question correctly and confused Computer Aided Learning with ordinary training using a computer. Many missed the key word **discuss** in the question.

6. There were some good imaginative and informed answers here but also a depressingly large number of accounts that merely concentrated on the mundane (OHT transparencies for instance) or ideas gleaned from this paper (CAL for instance). Again many candidates missed the **discuss** element of the question.

Advanced GCE (ICT) (3838/7838)
January 2007 Assessment Series

Unit Threshold Marks

Unit		Maximum Mark	a	b	c	d	e	u
2512	Raw	90	56	50	44	38	32	0
	UMS	90	72	63	54	45	36	0
2514	Raw	90	55	49	43	37	31	0
	UMS	90	72	63	54	45	36	0
2515	Raw	90	60	54	48	43	38	0
	UMS	90	72	63	54	45	36	0
2516	Raw	120	98	87	76	65	54	0
	UMS	120	96	84	72	60	48	0
2517	Raw	90	60	55	50	45	40	0
	UMS	90	72	63	54	45	36	0

Specification Aggregation Results

Overall threshold marks in UMS (i.e. 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	11.9	27.0	55.6	78.6	93.7	100.0	126
7838	0.0	22.2	55.6	100.0	100.0	100.0	18

144 candidates aggregated this series

For a description of how UMS marks are calculated see;
http://www.ocr.org.uk/exam_system/understand_ums.html

Statistics are correct at the time of publication

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