Introduction to Paper 2.1 Information Systems

Your lecturer – Ruth Court

I have been a lecturer in Information Systems and related Systems Design papers on ACCA and other professional accounting bodies for over 8 years. I started lecturing in 1993 in Malaysia on the predecessor of Paper 2.1 and Paper 5 (old syllabus) after having worked in both commercial and educational institutions in the UK for 4 years. After a year in Malaysia, I returned to London to take up a post there. I came back to the Far East in January 1999 to take up a full time lecturing position at FTMS. While working for FTMS, I have been teaching a wide range of courses in Singapore including CAT, ACCA and CIMA. The office here is the regional centre for all the courses in the region including Vietnam, Malaysia and Hong Kong.

While working in London I took up a position as a marker for ACCA, which I have now finished due to my other commitments for FTMS. During seminar 7 the mock examination and revision topics (this is explained more fully in the next section of the introduction), I will be helping you to ensure that all of your hard work and effort will enable you to gain success in December by applying examination techniques from my experience as a marker. We will discuss common issues and problems such as what does the marker like and dislike about particular scripts.

Content of this seminar

1. Review of the Online structure of seminars
2. Examiner
3. Structure of the examination
4. Differences between paper 2.1 and paper 5
5. Outline of the content of Online seminars
6. Study planner
7. Review of the December 2001 paper

FTMS Online

FTMS was first launched in September 1999 helping students to focus on their December 1999 examinations with an aim to provide high quality audio, visual and written documentation to students who were studying alone or in support of existing courses. FTMS Online is the world's first Internet delivery system for the provision of audio and PowerPoint presentations preparing students for their accounting qualifications.

Since the launch the lecture seminars have been used by a large number of students all over the world, enabling them to be more effective in their studies at home. You may have already listened to my introductory seminar and seen the presentation which supports the audio, in which case you are fully aware of the way in which FTMS Online operates. If you are using the notes first then I will explain to you the basic structure of FTMS Online.

Structure

There are a total of 7 seminars in the FTMS Online series

- **Six** 30 minute (1 – 6) seminars directed at individual areas of the syllabus
- **One 30-minute** seminar identifying the topics to concentrate on for the June examination plus a mock examination within comprehensive answers. This mock exam is made up of a variety of questions including past examples and also questions which have been written specifically by myself in preparation for the December examination. This seminar is very useful as it will give you the opportunity to assess your own progress and practice a question paper – this is especially important for those of you who are studying the paper for the first time and who have never seen a complete past paper.

Connected with Success

Each seminar in the in the series includes: -

- **High quality audio presentation** where I take you through the main areas of the syllabus content explaining terms and facts in simple language and developing key understanding in the areas covered. As well as content a range of questions are presented relating to the areas covered enabling you to practice and experience the type of questions that may be given in the December examination. It is very important that you pause the seminar at this point and read the question carefully and prepare your own answer. If you do not read or practice the question first yourself it will be almost impossible for you to continue to work through and understand the remaining part of the seminar.

- **PowerPoint** type presentation supporting the audio enabling you to easily follow the content of each seminar. These slides will 'pop' up at the correct intervals taking you through the entire 30 minutes.

- **Comprehensive notes** relating to each seminar. Within each one there are approximately 20 – 25 pages of notes relating to the syllabus content followed by questions and answers. You will be able to use the notes to help you to follow the content of the presentation and often explain in more detail topics mentioned within the presentation.

It is important for you to remember that you can pause or 'rewind' the presentation at any time you wish. This function is particularly important if a point has been presented to you which is not fully understood, you are able to listen again to improve understanding. As mentioned earlier you will need to use the pause function while you read through the question presented in the audio and write your own answer to it.

Additional services

In addition to the above audio seminars you may find a number of other additional payment services useful to help to ensure success in June.

- **Online Plus** - when you experience a problem with any of the subject matter you are able to email the details of your problem to a special email address and a suitably qualified person will investigate your problem and email a reply. This is a particularly important facility for those of you who are studying from home and do not have any access to qualified lecturer support.

- **Marking facility** – the 7th seminar contains a mock exam and you can have your answers marked and comments made on your answers. This will give you the opportunity to experience the exam structure and to put your understanding into words. It is vital that whatever exams you are taking in December that a complete paper is attempted before the exam date. This additional service enables you to do this, no matter your mark the experience of the mock will ensure that you are gaining more marks in the real thing, therefore enabling you to achieve the pass mark.

Why choose Online?

Online is the first Internet delivery system for lectures; therefore by using Online you are involved with something new and innovative. There are many reasons to choose to study paper 2.1 with Online. I have a wide range of experience of the syllabus and exam technique and I will bring this knowledge directly to you in a way that is easy and simple to understand. Online gives you the ability for you to learn and study whenever you wish; you could be 24 hours a day if you want to. The playback facility enables you to repeat sections over and over again until you are fully satisfied with the understanding of the topic. The computer does not need to be connected to the Internet to use the lectures as they are downloaded on the hard disk of your computer.

Connected with Success

Examiner

The examiner is Steve Skidmore and has been the examiner since December 1995 on the old syllabus paper 5; this will help with the preparation for your examination, as there are many examples of previous papers. These papers will become vital to you but you will need to have an understanding of the content of the paper to enable you to determine which questions are relevant to the current syllabus, this seminar aims to provide you with that understanding.

The examiner spent many years as a senior lecturer at DeMontford University in the UK teaching on Systems and Analysis and related subjects, he also taught ACCA study schools for 15 years and now he works in the commercial field advising on, and designing software solutions for small businesses. He may also be seen on some Open University television programs presenting lectures relating to the systems analysis and design area (much to my surprise one Sunday morning!) For those of you who have taken the CAT qualification, as your route into ACCA the examiner for B3 Information Technology Processes is the same, this will help you to be familiar with some of the terms and language which the examiner may use in this paper.

Current structure of the examination

Section A - Case study approximately 1000 words (although length can vary if diagrams are used). There are 3 questions relating to the scenario information, each of these questions are compulsory and have a total value of 60%, these questions will come from all three areas of the syllabus (see later notes)

Section B – there are 3 questions in this section, which again relate to the 3 areas of the syllabus, each have a value of 20 marks each therefore giving a total value of 40 % for this section.

(Reminder – you will need to make use of questions in the old syllabus but it should be remembered that questions in section B have a value of 15 marks and in section A there are 4 questions adding up to a value of 55%.)

Key Differences

Paper 5		**Paper 2.1**	
1.	Systems to handle and process information	1.	Managing information systems
2.	Forms of financial and related information systems	2.	Designing information systems
3.	Systems design and analysis	3.	Evaluating information systems
4.	Systems evaluation		
5.	Systems implementation		

As can be seen from the above table the old syllabus has 5 parts whereas the new syllabus only has three sections. The main difference between the old and the new syllabus is that the new is much easier to follow, particularly is you are trying to assess your progress through the subject, this was not the case with paper 5 with a number of section numbers and subheadings within the syllabus. This certainly made the subject difficult initially to plan and structure from a lecturer point of view therefore it must have been more difficult to follow as a student.

Excluded topics given within the study guide

- File and database design such as the use of hierarchical, network and relational structures
- Program design with the use of a third generation languages e.g. COBOL
- Computer hardware is not specifically examined

Additional excluded topics

- Systems theory
- Levels of management and a description of the information requirements at each level (3.4)
- Types of management support systems at used by managers at each level (3.4)
- Does not assume the use of any one particular development methodology
- Practical questions can be answered by any published methodology

A summary of the content of each of the 3 parts follows after which there is a more detailed study of the comparison of the two papers (5 & 2.1)

Part 1:Managing information systems

- **Role of information systems within business strategy** - although this topic was mentioned with paper 5 it has never been examined, it is likely to become more important due to the direct link with paper 3.4 Business Information Management where this topic is examined more in detail.
- **Application of trends of IT –** the need to understand how information technology can be used within the organisation to automate processes such as the production of reports and forecasting. Generally examined within the optional section of the paper but may become a more central theme of section A.
- **Outsourcing implications** – this area was important within the old syllabus and I see no reason for this to change with the understanding of the decision to outsource within a given scenario situation. The area of expansion could be the understanding of the topic in relation to strategic management and the linking of business and IT strategy.
- **Funding approaches** – this is the decision by the organisation to allocate the costs of the use of information technology to the department users, the methods available are service, cost and profit centres. This topic has been examined in the old syllabus but infrequently therefore there may become a more central topic especially for strategic decision-making.

- **Disaster recovery planning** – this topic has again been included within the old syllabus but was not examined. The inclusion of the topic within this heading perhaps indicates its increased importance and the link to business strategy planning along with the organisations' ability to assess potential risks and develop a policy to enable them to recover and return to normal operations as quickly as possible.
- **Feasibility study** – included within the old syllabus and has been a central area for a number of section A scenarios. The stages of the study have yet to be examined (as of May 2001).
- **Project planning** – was examined infrequently within the old syllabus but it seems as if overall the examiner is placing a greater emphasis on the area of project management therefore the issue of the planning of the project and its relation to business strategy will become more important.
- **Software used within project planning** – the manager of the project will need to make use of various software tools to improve the planning of the project. The examiner has been keen in previous papers to examine the understanding of the need for such tools and the way, in which they improve the management of the project as a whole, this will continue to be important within the new paper.

Part 2: Designing Information Systems

- **Participants within the development process and the waterfall approach** – the participants of the project have been examined in the past with particular reference to the project manager and the systems analyst. There has been no reference to the waterfall approach on the paper 5 syllabus or examination, therefore may be a possible reference to the topic within examinations
- **Development methodology application** – the examiner has been detailed within the study guide that no specific methodology will be examined although the definition and purpose of development methodologies remains a central theme.
- **User requirements of the new information system** – this topic has been examined within previous papers and was contained within the study guide for paper 5, it will therefore continue to be an important topic.

- **Problems of agreeing user requirements** – no reference has been made to agreeing user requirements, although the recognition of meeting user requirements within the development has always been an important area of the examination.
- **Documenting and modelling user requirements** – **processes** – this topic refers to the use of dataflow diagrams and flowcharting to assess the requirements of users. You will be required to construct, define and analyse the importance of this technique within the development lifecycle.
- **Documenting and modelling user requirements – static structures** - this topic refers to the use of entity modelling or logical data structures to assess the requirements of users. You will be required to construct, define and analyse the importance of this technique within the development lifecycle.
- **Documenting and modelling user requirements – events** - this topic refers to the use entity life histories to assess the requirements of users. You will be required to construct, define and analyse the importance of this technique within the development lifecycle.
- **External design** – the requirements for the users have a system which they are easily able to interface and work with has been examined previously in direct reference to the term 'user friendly'. As the use of computerised information systems increases the importance of this topic will also increase, therefore an understanding of the design of the system should be understood.
- **Software selection** – the requirement for the explanation and advantages of off the shelf package solutions and bespoke software has been tested in the past. There may be a requirement to assess the given scenario information to determine which option is the best.
- **CASE tools** – regularly examined within the old paper 5 examination there will be a continued requirement for the understanding of this topic, it has been expanded slightly with the inclusion of the requirement to understand representative products.
- **4th Generation Languages** – this is an important area and has a direct link within the understanding of prototyping, i.e. this is the language often used to create the prototype as it enables the user to accurately test the actual information system that they will be required to use.

Part 3: Evaluating Information Systems

- **Back up and audit procedures** – auditing in particular internal audit implications has appeared in several papers especially the compulsory section. There is an increased focus on the requirement to have adequate back up procedures and proper 'house keeping' controls.
- **Security legislation** – the understanding of the Data Protection Act and Computer Misuse Act of the UK have been examined previously. Those of you studying outside the UK there is unlikely to be direct reference to UK section numbers and heading, the examiner tends to be more concerned with the understanding of the importance and existence of the legislation in relation to a given scenario.
- **Physical and remote security systems** – this topic has been a requirement previously with particular understanding of passwords, viruses and physical and remote security controls
- **Quality control and the V model and relationship to quality assurance** – this topic has definitely increased in importance and there may be an early question on the paper relating to the V model
- **Testing** – has been examined regularly within the old paper, with particular focus on acceptance testing, I see no reason for this to change in the future.
- **Decision tables as part of the testing procedure** – decision tables have been examined on paper 5 but never along with testing.
- **Implementation documentation –** the requirement for the understanding of the existence of documentation as part of the development methodology and the assessment of user requirements has been examined in paper 5, it will continue to be an important area of understanding.
- **Type of changeover method** – this topic is regularly examined and is also fairly straightforward to understand i.e. parallel and direct changeover, although the examiner is interested in the selection of an approach to a given scenario and reasons for that selection.
- **Personnel procedures during the conversion process** – file conversion and training have been examined, although a more detailed understanding of procedures required during the development may be needed.

- **Project review and Change control** – this topic is likely to become more important within the new paper, as project management as a whole has increased importance. The review area has often been tested within the compulsory section where review of the information is required to offer solutions to the given problems
- **Role of the accountant within the development process** – this topic seems to have a direct link with the CAT B3 paper, as this is also a requirement within the study guide. It has not been examined before and therefore is likely to become an important area of understanding.

Key Differences

Paper 2.1			Paper 5 Content
Part 1 **Managing information systems (IS)**			
a)	**Business strategy and IS/IT alignment**		
	Requires the explanation of an approach that an organisation may follow to formulate its strategic business objectives	*	This area is likely to become more important due to the increased link between papers 3.4 and 3.5.
	The discussion of how information systems may be used to assist in achieving these objectives		Likely to become more important under the new syllabus – not previously examined
	Identification of current trends in IT and the opportunities that they offer the organisation		A more important area which was not included within the old syllabus due to the reduced impact of IT
	Ability to distinguish between business strategy and information systems strategy	*	Not included within the old syllabus at all
	Identification of the ownership of the IS strategy	*	Not included within the old syllabus at all
b)	**Delivering information systems – organisational arrangements**		
	Describe the traditional structure of an centralised information system department and the roles and responsibilities of the function		Examined on previous papers – increasing importance particularly the issue of roles, relate types of structures to the given scenario examples.
	Explain the principles of decentralised function	*	As above

	Discuss the advantages and disadvantages of centralising and decentralising the IS function		As above
	Explain the principles of outsourcing the IS function	*	Important within the old syllabus
	Describe the advantages and disadvantages of outsourcing the IS function	*	As above
c)	**Delivering information systems – accounting issues**		
	Briefly describe the costs incurred in developing an information system		Examined on previous papers
	Describe how the costs of the IS function may be distributed between the customer and departments		Increasing importance as a concept, perhaps in relation to a given scenario example
	Explain the benefits, drawbacks of cross charging costs	*	New area and likely to be more important as an organisation concept
	Describe the advantages and disadvantages of establishing the IS function as separate company		Examined previously, likely to become an increasingly important concept.
	Describe the problems of accounting for shared infrastructure costs	*	Not included within the old syllabus
d	**Organising information system – structural issues**		
	Describe the typical hardware, software, data and communication structures found within information systems structures		Not included within the old syllabus
	Discuss the meaning and need for disaster recovery plans	*	Not specifically mentioned within the old syllabus or examined
	Discuss the meaning and need for risk management process	*	Not specifically mentioned within the old syllabus or examined

	Describe the meaning and implications of legacy systems	*	Not specifically mentioned within the old syllabus or examined
	Discuss the relationship of IS with end users and the implications of the expectations and skills of end users		Human computer interface was included on the old syllabus, although no examined frequently
e)	**Feasibility Study**		
	Explain the purpose and objectives of the feasibility study	*	Not specifically mentioned within the old syllabus
	Evaluate the technical, operational, social and economic feasibility of a proposed project		Included within the old syllabus and examined
	Describe and categorise the benefits and costs of the proposed project	*	Not specifically mentioned within the old syllabus
	Apply appropriate investment appraisal techniques to determine the economic feasibility of the project		Examined within the old syllabus, possible increasing importance
	Define the typical structure and content of a feasibility study report		Mentioned within the old syllabus although not examined
f)	**Project initiation**		
	Define the contents and structure of the terms of reference		Included within the old syllabus and examined
	Describe the typical contents of a Project Quality Plan and explain the need for such a plan	*	Not specifically mentioned within the old syllabus
	Identify the roles and responsibilities of staff who will manage and participate in the project		Included within the old syllabus and examined
	Define in detail the role and responsibilities of the project manager		Included within the old syllabus and examined only note the word **detail**
	Explain the concept of a flat management structure and its application to project based development		Included within the old syllabus but not to the application to a project, therefore increasing importance of this aspect

g)	**Project planning**		
	Assist in splitting the project in its main phases	*	Not examined before
	Participate in the breakdown of work in lower level task assist in the estimation of the time taken to complete these lower level tasks		No reference made to the task of estimation of the time taken to complete tasks, although time planning has been examined previously
	Define dependencies between lower level tasks	*	No reference on the old syllabus
	Construct and interpret a project network		Previously included and examined within paper 5
	Construct and interpret a Gantt Cart	*	Not included within the old syllabus
h)	**Project monitoring and control**		
	Describe methods of monitoring and reporting progress		Increased importance within paper 2.1
	Define the reasons for slippage and how to deal with slippage when it occurs		Increased importance within paper 2.1
	Discuss the reasons for changes during the project and the need for a project change procedure	*	No included within the old syllabus
	Reflect the effects of progress, slippage and change requests on the project plan	*	Not included within the old syllabus
	Discuss the particular problems of planning and controlling IS projects		Important area within the old syllabus therefore increased focus

i)	**Software support for project management**		
	Define the meaning of a project management software package and give a brief list of representative products		No reference made to products of project management software
	Describe the range of features and functions that a project management software may provide		More detail given within the new syllabus
	Explain the advantages of using a project management software package may provide		Continued importance within the current paper
	Explain the advantages of using project management software package in the project management process		Continued importance within the current paper

	Part 2 **Designing Information Systems**		
a)	**The information systems development process**		
	Define the participants in the systems development process – managers, analysts, designers, programmers and testers		Examined in the old syllabus but increased opportunity due to the participants being named within the study guide
	Describe the waterfall approach to systems development and identify its application in a representative systems development methodology	*	Never examined or mentioned within the old paper
	Describe the spiral approach to systems development and identify its application in a representative systems development methodology	*	Never examined or mentioned within the old paper
	Discuss the relative merits of the waterfall and spiral approach, including an understanding of the hybrid methodologies that include the elements of both	*	Never examined or mentioned within the old paper
b)	**Investigating and recording user requirements**		
	Define the tasks of planning undertaking and documents a user interview		More detail given within the current study guide
	Identify the potential role of background research, questionnaires and special purpose surveys in the definition of requirements		More detail given within the current study guide
	Describe the purpose, conduct and recording of a facilitated user workshop		More detail given within the current study guide

	Explain the potential use of prototyping in requirements definition		Central area within the old paper continued importance
	Explain how the requirements can be collected from current computerised information systems		Central area within the old paper continued importance
	Discuss the problems users have in defining, agreeing and prioritising requirements		More detail given within the current study guide
c)	**Documenting and modelling user requirements** – **Processes** –		
	Describe the need for building a business model of user requirements		Regularly examined within the old paper
	Briefly describe different approaches to modelling the business process		Regularly examined within the old paper
	Describe in detail the notation of one of these business process models	*	No reference to notation within the old paper 5 study guide
	Construct a business process model of narrative user requirements using this notation		Central area within the old paper
	Explain the role of process models in the systems development process		Central area within the old paper
d)	**Documenting and modelling user requirements** – **Static structures** –		
	Describe the need for building a business structure model of user requirements		Regularly examined within the old paper
	Briefly describe different approaches to modelling the business structure		Regularly examined within the old paper
	Describe in detail the notation of one of these business structure models	*	No reference to notation within the old paper 5 study guide

	Construct a business structure model of narrative user requirements using the notation		Central area within the old paper
	Explain the role of the structure models in the systems development process		Central area within the old paper
e)	**Documenting and modelling user requirements** – **Events** –		
	Describe the need for building a business event model of user requirements		Contained within the paper 5 study guide but not examined, included on the pilot paper for paper 2.1
	Briefly describe different approaches to modelling business events		Contained within the paper 5 study guide but not examined, included on the pilot paper for paper 2.1
	Describe in detail the notation of one these business event models		Contained within the paper 5 study guide but not examined, included on the pilot paper for paper 2.1
	Construct a business event model of narrative user requirements using this notation		Contained within the paper 5 study guide but not examined, included on the pilot paper for paper 2.1
	Explain the role of event models in the systems development process		Contained within the paper 5 study guide but not examined, included on the pilot paper for paper 2.1
f)	**External design**		
	Define the characteristics of a 'user friendly' system		Examined within the old paper 5 examination
	Describe the task of external design and distinguish it from internal design	*	No reference to this topic on the old study guide for paper 5
	Select appropriate technology to support the output design		Examined within the old paper 5 examination

	Design effective inputs		Input knowledge required within the old study guide but no reference to the work design
	Select appropriate technology to support input design		As above
	Describe how the user interface may be structured for ease of use		Examined within the old paper 5 examination
	Explain how prototyping may be used in defining an external design		Examined within the old paper 5 examination
g)	**Developing a solution to fulfil requirements**		
	Define the bespoke software approach to fulfilling the user's information requirements		Examined within the old paper 5 examination
	Briefly describe the tasks of design, programming and testing required in developing a bespoke solution		Increased reference in particular to the testing of the bespoke solution, therefore increased importance
	Define the application software package approach to fulfilling the users' information systems requirements		Examined within the old paper 5 examination
	Briefly describe the tasks of package selection, evaluation and testing required in selecting an appropriate application software package		Examined within the old paper 5 examination
	Describe the relative merits of the bespoke systems development and application package approaches in fulfilling an information systems requirement		Examined within the old paper 5 examination
h)	**Software package selection**		
	Describe the structure and contents of the Invitation To Tender (ITT)	*	Contained within the old paper guide, but rarely examined

	Describe how to identify software packages and their suppliers that may potentially fulfil the information system requirements		Examined within the old paper 5 examination
	Develop suitable procedures for distributing an ITT and dealing with subsequent enquiries and bids	*	Increased reference within the new study guide therefore likely to have increased importance
	Describe a process for evaluating the application software package, the supplier of the package and the bid received by the supplier		Increased reference within the new study guide therefore likely to have increased importance
	Describe the risks of the application software package approach to systems development and how these might be removed or reduced		Examined within the old paper 5 examination
i)	**Software support for the systems development process**		
	Defined a Computer Aided Software Engineering (CASE) tool and give a brief list of representative products		Examined within the old paper 5 examination
	Describe a range of features and functions that a CASE tool may provide		Examined within the old paper 5 examination
	Explain the advantages of using CASE tool in the systems development process		Examined within the old paper 5 examination
	Define a Fourth Generation Language and give a brief list of representative products		Examined within the old paper 5 examination but no reference to the representative products
	Describe a range of features and functions of a 4GL may provide	*	Central theme within paper 5 continued importance
	Explain how a 4GL contributes to the prototyping process		Examined within the old paper 5 examination

	Part 3 **Evaluating information systems**		
a)	**Define and record performance and volume requirements of information systems**		
	Discuss the need for archiving and back up and restore, and other 'house keeping' functions		Increased importance within the new study guide especially – house keeping
	Explain the need for software audit trail and define the contents of such a trail		Examined within the old paper 5 examination
	Examine the need to provide interfaces with other systems and discuss the implications of developing these interfaces		Increased importance within the new study guide, although the idea of interfacing systems have been examined previously
	Establish requirements for data conversion and data creation		Examined within the old paper 5 examination
b)	**Legal compliance in information systems**		
	Describe the principles, terms and coverage typified by the UK Data Protection Act		Examined within the old paper 5 examination
	Describe the principles, terms and coverage typified by the UK Computer Misuse Act		Examined within the old paper 5 examination
	Explain the implications of software licences and copyright law in computer systems development	*	Not examined within the old paper 5 examination
	Discuss the legal implications of software supply with particular reference to ownership, liability and damages		Increased importance within the new study guide especially with reference ownership, liability and damages of software supply

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c)	**Implementing security and legal requirements**		
	Describe methods to ensure the physical security of IT systems		Examined within the old paper 5 examination
	Discuss the role, implementation and maintenance of a password system		Examined within the old paper 5 examination
	Explain representative clerical and software controls that should assist in maintaining the integrity of a system		Examined within the old paper 5 examination
	Describe the principles and application of encryption techniques		Examined within the old paper 5 examination, but possible increased detail required
	Discuss the implication of software viruses and malpractice		Examined within the old paper 5 examination
	Discuss how the requirements of the UK Data Protection and UK Computer Misuse legislation may be implemented		Examined within the old paper 5 examination
d)	**Quality insurance in the management development process**		
	Define the characteristics of a quality software product		Examined within the old paper 5 examination
	Quality assurance in the management and development process		Increased importance within the paper
	Define the characteristics of a quality software product		Increased importance within the paper, but increased emphasis on the characteristics required
	Define the terms, quality and management, quality assurance and quality and control		Examined within the old paper 5 examination, but study guide more clear with the definition of terms
	Describe the V model and its application to quality assurance and testing	*	Never mentioned within the old paper or examined

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	Explain the limitations of testing		Central topic within paper 5, continued emphasis within paper 2.1
	Participate in the quality assurance of deliverables in requirement specification using formal static testing methods	*	Never mentioned within the old paper or examined
	Explain the role of standards, in particular, their application in quality assurance		Central topic within paper 5, continued emphasis within paper 2.1
	Briefly describe the task of unit testing in bespoke systems development	*	Never mentioned within the old paper or examined
e)	**Systems and user acceptance testing**		
	Define the scope of systems testing		Examined previously, increased importance
	Distinguish between dynamic and static testing		Central topic within paper 5, continued emphasis within paper 2.1
	Use a cause effect chart (decision table) to develop an appropriate test script for a representative systems test		Examined within paper 5 but, never linked with testing, therefore increased emphasis
	Explain the scope and importance of performance testing and usability testing		Central topic within paper 5, continued emphasis within paper 2.1
	Define the scope and procedures of user acceptance testing		Central topic within paper 5, continued emphasis within paper 2.1
	Describe the potential use of automated tools to support systems and user acceptance testing		Central topic within paper 5, continued emphasis within paper 2.1

f)	**Implementation issues and implementation methods**		
	Plan for data conversion and creation		Conversion examined but, never the idea of planning the conversion
	Discuss the need for training and suggest different methods of delivering such training		Examined previously, increased importance
	Describe the type of documentation needed to support implementation and comment on ways of effectively organising and presenting this documentation		Examined previously, increased importance
	Distinguish between parallel running and direct changeover and comment on the advantages and disadvantages of each		Examined previously
g)	**Post implementation issues**		
	Describe the metrics required to measure the success of the system	*	Never mentioned within the old paper or examined
	Discuss the procedures that have to be implemented to effectively collect the agreed metrics	*	Never mentioned within the old paper or examined
	Identify what procedures and personnel should be put in place to support the users of the system		Examined previously and contained within the paper 5 study guide
	Explain the possible role of software monitors in measuring the success of the system,	*	Never mentioned within the old paper or examined
	Describe the purpose and conduct of an end-project review and a post implementation review		Mentioned on the old syllabus study guide but, rarely examined
	Describe the structure and content of a report from and end-project review and a post implementation review	*	Never mentioned within the old paper or examined

h)	**Change control in systems development and maintenance**		
	Describe the different types of maintenance that a system may require		Examined previously and contained within the paper 5 study guide
	Explain the need for a change control process for dealing with these changes		Examined previously and contained within the paper 5 study guide
	Describe a maintenance lifecycle	*	Never mentioned within the old paper or examined
	Explain the meaning and problems of regression testing	*	Never mentioned within the old paper or examined
	Discuss the role of user groups and their influence on systems requirements	*	Never mentioned within the old paper or examined
i)	**Relationship of management development process and quality**		
	Describe the relationship between project management and the systems development process		Both topics mentioned and examined but, not the relationship between them, importance increase
	Describe the relationship between the systems development process and quality assurance		Both topics mentioned and examined but, not the relationship between them, importance increase
	Explain the time/cost/quality triangle and its implications for information systems projects	*	Never mentioned within the old paper or examined
	Discuss the need for automation to improve the efficiency and effectiveness of information systems management, delivery and quality assurance		Examined previously
	Explain the role of the accountant in information systems management, delivery and quality assurance	*	Never mentioned within the old paper or examined

* Refers to topics which are new in relation to the old paper 5 study guide, other topics many have increased in importance detail is given within the table

Study Planner

To ensure success in the June examinations it is vital that you prepare your time leading up to these examinations. The following study plan is formulated to give you the initial strategy for the Information Analysis examination. The syllabus has been divided into 10 study units. When studying each unit you should spend approximately the same time. The weighting given to the various topics takes into account the complexity and their importance in the December examination**.**

There are two main points to remember as you prepare for the examination:

1. The examiner expects you to have a basic understanding of the use of computers within a modern environment. He will not expect you to explain detailed operational factors in relation to information technology but he will expect you to apply solutions to business problems, which may require you to have an information technology understanding. Therefore general reading including articles from the Student Accountant and small practical tasks such as using a microcomputer will help your understanding.
2. The exam has a large application orientation centred around a 60 mark case study therefore having good technical knowledge will not ensure success, very few marks can be awarded for rote learning. Your preparation must include written answers centred on these cases allowing you to practice this vital skill, the use of this word practical is not concerned with the actual hands on use of a accounting information system but the recognition of problems and solutions.

The knowledge checklist identifies the knowledge and skills required to pass the examination.

Connected with Success

Unit 1

Syllabus content: business strategy and IS/IT alignment, delivering information systems, organisational arrangements and accounting issues.

Knowledge Checklist

Develop an understanding of the background to the structure of organisations including the formulation of objectives and primary and secondary activities to be found within both service and product based businesses. The identification of the current trends in information technology used within an organisation and how the use of this technology may enable the organisation to develop a competitive advantage. The understanding of how an organisation develops an information strategy to improve competitiveness and, be able to distinguish between information strategy and business strategy. Be able to describe the structure of a centralised and decentralised information system and to distinguish the advantages and disadvantage of each approach. Be able to relate this understanding to the creation of the information systems function. Explanation of the principles of the outsourcing approach and the advantages and disadvantages of this decision should be understood. To develop an explanation of the delivery of information systems and the accounting issues that affect the organisation. You should be able to describe the costs of the information system and how they may be distributed between the customer departments, and the principles, benefits and drawbacks of cross charging costs. You should also be able to discuss the issues raised by establishing the information system function as a cost or a profit centre and as a separate company.

Unit 2

Syllabus content: organising information systems, structural issues, and feasibility study and project initiation.

Knowledge Checklist

You should be able to describe the different types of hardware, software, data and communications infrastructures found within information systems functions. The need for and principles of a discovery plan should be understood all with the need for risk management process. The meaning and implications of legacy systems, and the role and implications of the expectations of the user within the development process should be recognised. The importance of the feasibility study and the objectives which this study is trying to achieve will need to be understood. There are types of feasibility to be addressed within the study including technical, economic, operational and social and this will need to be applied to a specific scenario to evaluate its potential success. You should be able to explain the various costs and benefits of a particular decision in relation to its use within an organisation along with the application of an appropriate investment appraisal technique. The contents of the terms of reference and Project Quality Plan should be understood along with the need for such documents. The role and responsibilities of key staff involved in the project should be understood including the importance of the project manager. The understanding of the methods of teams structures including flat and matrix structures need to be applied the organisation.

Unit 3

Syllabus content: project planning, project monitoring and control, and software support for project management.

Knowledge checklist

You should be able to understand the main phases of the project along with the estimation of the time taken to complete each of these phases and how these phases are divided into lower level tasks. The dependencies of each of the task should be recognised and how these dependencies may effect the completion of the project. You should be able to construct and interpret a project network and a Gantt chart. Be able to describe the methods of monitoring and reporting the progress of the project and the reasons for slippage and how this slippage may occur, and how this may effect the changes in the management of the project. You will need to understand the problems of planning and controlling systems projects. You will need to be able to define the meaning of project management software and give a brief list of representative products and be able to describe the functions and features that the use of this software might provide. The advantages of the use of project software should be understood.

Unit 4

Syllabus content: the information systems development process, investigating and reporting user requirements.

Knowledge checklist

Define the participants in a systems development process including managers, analysts, programmers and testers. You should be able to define the waterfall and spiral approach to systems development and be able to identify its application in a development methodology and the relative merits of these approaches including an understanding of hybrid methodologies that include elements of both. The understanding of the tasks of planning, undertaking a user interview, along with the role of questionnaires and special purpose surveys in the requirements analysis phase of the development needs to be recognised

within the development process. The importance of the role of prototyping within the specification of requirements of the user needs to be understood, further to this the modifications of the prototype and the review of the model to continually address the needs of the user.

Unit 5

Syllabus content: documenting and modelling user requirements – process, static structures and events

Knowledge checklist

Be able to describe the need for building a model to meet the requirements of the user and the different processes for modelling the business process. You should have an understanding of the notation used within the business process and the construction of the model from the narrative along with the role that these models play within the development process. Further understanding is required in relation to the static structures and events within the business especially in relation to the notation, construction and analysis of such diagrammatic techniques.

Unit 6

Syllabus content: external design, developing a solution to fulfil requirements

Knowledge checklist

The syllabus requires an understanding of the components of a user friendly system including the hardware and software specification. You should be able to describe the need for such systems in relation to the increased use of the information system and the speed and ease of interaction. The specification selection needs to be effective for the type of interaction and the level and skills of the person using that information system. The importance of external design in relation to prototyping will need to be understood.

Unit 7

Syllabus content: software package selection and the software support or the systems development process

Knowledge checklist

You will need to consider the use of a bespoke system to meet the requirements of the users who need to interact with it, in comparison to this the development of a system using a package solution will need to be understood. In relation to this the testing procedures and the necessary evaluation requirements to ensure that the program is of good quality need to be recognised in relation to the development of the new software. The organisation will need to consider the type of software selection made in relation to the requirements of the organisation and the individual users, you will need to be able to discuss the various advantages and disadvantages of these approaches and perhaps even suggest a possible solution which the organisation can implement. There may be a need for the organisation to develop a proposal to a supplier requiring them to submit a response, this is known as an Invitation To Tender (ITT), you will need to know the content of the document. An important area of understanding is of the use of CASE (computer aided software engineering) tools and their relevance to the project planning process. You will also need to be able to explain the range of features and functions of a Fourth Generation Language.

Unit 8

Syllabus content: technical information systems requirements, legal compliance in information systems and implementing security and legal requirements.

Knowledge checklist

The evaluation of the new information will need to be performed to enable the management to determine if the system meets the requirements of the users. Within this part of the syllabus you will need to be able to describe the backup, restore and housekeeping functions and the role of the internal audit function to ensure that the interfaces between application areas are accurate. The importance and principles of security legislation to the protection of data will need to be understood – Data Protection and Computer Misuse Act. You will need to recognise the requirement for the organisation to have both physical and remote security controls including passwords and data encryption.

Unit 9

Syllabus content: quality assurance in the management and development process, systems and user acceptance testing and implementation issues and implementation methods.

Knowledge Checklist

Quality assurance and the need to ensure that the information system developed by the organisation meets the exact requirements of the users and the organisation as a whole will need to be explained. You will need to be able to describe the various stages of testing and in particular the V approach and in particular the role of these standards to ensure quality of the new information system. The scope of systems testing and the use of distinction between dynamic and static testing will need to be explained, along with the use of the cause effect chart to develop an appropriate test script for a representative test. A final area of this unit is the recognition of the importance of user testing within the quality assurance process.

Unit 10

Syllabus content: post implementation issues, change control in systems development and maintenance and the relationship of management, development process and quality.

Knowledge Checklist

The implementation procedures and issues involved within physically installing the new IS into the organisation will need to be addressed such as data conversion process, training, documentation and methods of changeover including direct and parallel. You will need to explain the term metrics required to measure the success of the system and the procedures which the organisation may put in place to effectively collect the agreed metrics. The issues involved with monitoring the success of the system will need to be investigated and in particular the role of software. You will need to describe the purpose and conduct of an end-project review and post implementation review, also the content of the report from the end project review and post implementation review may need to be explained. Finally within this unit you will need to be able to describe the different types of maintenance involved to ensure the continued success of the information system and the role of the accountant in information systems management delivery and quality assurance.

Content of the Online Lectures

There are 3 parts to the syllabus and therefore I have allocated two seminars to each part. The seminar will guide you through the key areas, although you must remember that you will need to back up this content with extensive work on your own.

1. Strategy and accounting issues
2. Project planning and feasibility study
3. Information systems development process
4. Modelling requirements and use of software products
5. Legislation and audit procedures
6. Implementation procedures

Examiner Comments

Each September and March all the examiners of ACCA subjects write a review of the previous paper and the general weaknesses of that paper. These articles should always be read carefully as they provide useful information for the upcoming examinations.

- Concentration on the content of a question leaving little time to apply to the case or example given in the question.
- Candidates automatically presume they need to know everything or try to revise just a few areas. Both of these approaches are not ideal and the key to success is finding the balance.
- Unable to use the information within the case, some candidates seem to read the case then totally ignore it in their answers, therefore losing valuable application marks.
- Presentation techniques are an important way of gaining extra marks, but it is more than having reasonable handwriting, the marker needs to be able to easily read your answer and give marks.
- Some candidates sit the paper more than once, therefore candidates need to analyse why they failed the previous time trying to ensure that they do not make the same mistakes again.
- Length of answers do not reflect the number of marks available, either too much or too little, for example a page of text for a two mark answer is wasting time and equally an answer of two line is insufficient for a 5 mark question.
- Candidates fail to read the question carefully focusing on perhaps one word within the question, which is not the focal point of the answer.

Review of December 2001

Scenario content

This scenario was the usual length of approximately 700 words relating to a local authority and its recent IS developments and IS department structure. Two simple diagrams were given within the scenario to show the current structure and the structure after the process of change has taken place. These diagrams are often an indication of the content of the questions which are to follow and can give an overview of the scenario information therefore watch out for them in future examinations.

The scenario information continues to explain the process of IS change with the use of textual definitions with 2 given examples within a table relating to the recording of delegate attendance and the calculation of the training costs. This information is also on occasion transmitted by word of mouth.

The authority is a non profit making organisation, this would need to be a theme of the answers and therefore has a primary objective of ensuring that people living within the rural area in which the authority serves is able to give the best value for money and quality service. Restructuring the IS department has been suggested to help improve the allocation of resources due to the introduction of the government's new regional tax incentives.

The two suggestions have been made these are to have a more flexible department structure and to formalise the user specification document. The restructure proposed is to have a flatter department with individuals taking on a number of responsibilities and therefore these staff will become multi skilled. The second option is to introduce the use of graphical models to record requirements such as those used in formal object oriented and structured development methods. This would result in improved change control and quality assurance.

Finally the authority is proposing that due to lack of internal resources available to introduce the new tax incentive that they consider outsourcing and in particular off shore development provided by a third part.

Question 1

This was a very straightforward lead in question typical of Steve Skidmore allowing candidates to become quickly familiar with the scenario material. In this question was the requirement to explain the role of the systems analyst, programmer, data analyst and project manager in relation to the development. Each role had a value of 4 marks each therefore 4 different suggestions need to be made such as the planning of resources, division of responsibilities to the various team members by the project manager.

The final requirement within this question related to the explanation of an advantage and disadvantage of the adoption of flatter approach to the authority. Each point had a value of 2 marks each, requiring the explanation of the point rather than just the heading. This question has been asked a number of times previously and should therefore not have caused too much of a problem.

Question 2

This question essentially focused on the use of development methodologies within the development stage to reduce the problems highlighted within the case. The first parts of the question were theoretical with the definition of importance of development methods and the notation of a graphical model used within the development. The final aspect of the question related to the use of a CASE (computer aided software engineering) tool to create the graphical models.

This is a key area of the syllabus and we should perhaps always expect a question relating to the use of graphical models, although one particular type may be highlighted. There are a number of past questions from paper 5 that may be used to raise your knowledge and understanding in this area.

Question 3

This was perhaps the most difficult question on the exam paper leading to the lowest number of marks awarded. It related to the importance of change control in relation to use of development standards. Although answers may be poor its important to recognise that the markers expectations may be reduced and therefore a weak or short answer may still gain a reasonable proportion of the marks.

The last marks of the questions may have improved the overall mark as they related to the decision to outsource the development using a third party provider. Examined on a number of previous questions helping to clarify depth of understanding and knowledge.

Question 4

This may have been the most popular choice of question in section b) relating to the area of the construction of a critical path from given table information. The remaining 6 marks of the 12 allocated to it required the analysis of the chart. These questions always tend to be high scoring as often candidates find them easy to construct and have the ability to evaluate their own understanding during the revision phase.

The final section was designed to limit the number of marks achievable for the candidate who was unable to explain their knowledge in relation to risk management. The answer needed to demonstrate an understanding that a number of risks can be identified with the development of any new system such as supplier breakdown (no delivery), team members unable to work together, escalating costs etc. Also within the answer an explanation of how those risks may be reduced is also needed.

Question 5

This question related to the explanation of terms that may be used to describe an information systems' user friendliness, the terms given within the question were pull down lists, default values and icons. The requirement necessitates both an explanation of the terms and why they are made more user friendly, many answers only focused on the reasons why without explaining what the terms mean.

The final part of the question also relates to the designing part of the syllabus with the definition and role of prototyping within the development process. This area is fundamental to the understanding of the involvement of users and should therefore not have caused too many problems. The examiner has made the 11 marks easier to achieve with the division into 3 sections, including why the use of prototyping assists users in defining their functional requirements and the evaluation of the software.

Question 6

The final requirement of the paper relates to the evaluation of information systems in particular the maintenance of information systems – corrective, perfective and adaptive. To enable you to achieve the 3 marks available for each section the reasons why this type of maintenance is necessary will need to be included within the answer. Straightforward area of the syllabus that has been examined previously therefore should not have caused too much of a problem.

The final part of the question relates to testing, this was no great surprise as the topic had not been examined for some time and the area has expanded in importance on the new syllabus. Again the requirements to the question were clear enabling a high score on this section b) question.

Paper 2.1 Information Systems

Likely Examination Areas for June 2002

Question	December 2001	June 2002	Comments
1	Role of people involved in the development process	Strategy	Not been examined within the paper before, new area therefore possible increased importance within the paper
2	Development methods and use of graphical models, implications of the use of CASE	Analysis of a data flow diagram	Likely to continue to receive a question relating to the graphical models used in the designing process only likely to more practical rather than theoretical in comparison to the last paper
3	Change control	Internet and web based technology	Has not been examined since December 2000, possibility of the introduction of the use of an intranet in comparison to other paper based methods
4	Critical path analysis and risk management	Feasibility study	Topic has not been examined since June 1998, with the exception of costs and benefits which appeared in June 2001. Watch out for analysis of the types of feasibility.

5	User friendly and prototyping	Supplier selection and the invitation to tender	These topics have not been examined for some time; application to a scenario may be required. Perhaps linked to a question on supplier risk and 4th generation languages
6	Maintenance and testing	Security legislation and implementation procedures	The development of a new system in relation to the security legislation which needs to be adhered. May include a requirement on training.

Pilot Paper Review

The scenario concerns an insurance company who have recently implemented an information systems to help them to provide holiday quotations for clients over the telephone. We are told within the scenario that this product has never been sold to clients before and therefore the staff are inexperienced in offering this kind of service. The scenario then continues to give details relating to the implementation of the system which was both late and over budget and used a new type of software.

Four main problems have been identified which have arisen when the system has finally been implemented within the organisation: -

1. Illogical data entry
2. Unclear field entry
3. Inconsistent cursor control
4. Performance problems

The company has commissioned a management consultancy company to investigate the recently implemented information system and make recommendations. The report included the following items:

- Project risk increased due to lack of experience by users, language selection and high performance requirements
- Software – in relation to the software selection, possible adoption of an applications software package

Question 1a)

This is a general question relating to the reduction of the risk of the project e.g. the users of the system have had no previous experience of the use of the system; each section has a value of 4 marks. You will need to explain your answer in relation to CAET insurance bringing information from the scenario.

Question 1b)

This requirement focuses on the area of the Development of a Project Quality Plan (PQP) which is contained within the study guide and is a new area in comparison to the old paper 5 syllabus. This plan is an important element of the successful implementation of a new IS the question requires and explanation of the role of the Project Sponsor and the project Plan in relation to CAET Insurance. (4 marks each)

Question 2a)

The second requirement within the question is a further analysis of problems in relation to the new information and the methods and solutions which may be implemented by the organisation now that the system is live (they do not abandon the bespoke system). The illogical data entry screens can be reformatted for example so that they follow a more reasonable method i.e. the way that the staff perform the task, this will help them to improve the efficiency of the use of the system and

Question 2b

This question is a continuation of the theme of part a) using the 4 problems headings this time the question requires an explanation as to how the organisation would have been avoided and detected the problems identified before the system went live. For example prototyping may have identified the performance problems with thorough and documented acceptance of the new IS with the users finally signing off the test and that they accept the systems test before it goes live.

Question 3a)

This question relates to the development of a bespoke system and the stages that will be addressed including requirements analysis, systems design and programming in relation to the quality assurance and testing procedures. It is important to note that the examiner has given the stages within the question reducing the requirement to remember any specific methodology such as SSADM (structured systems analysis and design methodology).

Question 3b)

Question 3 b) requires an explanation of the quality assurance and testing procedures that should be applied when using a software package solution. You are then required to make a further comment on the assertion that the software is 'tried, tested and error free.' This topic has been regularly examined, and also the examiner has tested the requirement to make a comment on a given statement several times in previous papers of the old syllabus.

Question 4

This question relates to the first part of the syllabus the managing of the information system and relates to the decision to outsource and legacy systems and use of external agencies to maintain the information systems, a further requirement of this question is to identify the advantages of the recommendation. The final part of the question relates to the use of project management software package which includes the explanation of the use and the advantages which might be achieved if the organisation decides to adopt this approach.

Question 5

Question 5 relates to the designing of information systems and the role of business analyst. The requirement is for an explanation of the specific activities that the analyst should undertake while preparing for an interview with a user. The further requirement of the question is to complete a construction of an entity life history along with a key.

Question 6

The last question of the paper relates to the final area of the syllabus which is the evaluation of the information systems. The requirement is for an explanation of the purpose of a post implementation review, along with the measures that could be used by the manager to quantity the success of the application software. The final requirement is for an explanation of the components for a procedure for recording, prioritising and implementing these changes.