General comments

It appeared candidates did not understand and found difficulty with the use of diagrams as part of the investigation. There was also confusion over the management of a development project. The stages of development are important but it is how the whole project is managed which was required. The candidate should be reminded to read the questions carefully, look at the number of marks available and keep answers to a minimum for a small number of marks expanding answers for larger marked questions. It is a matter of examination technique. The use of the word brief gives a good indication of the detail required.

Questions Report:

Q1	Comment The drawing of diagrams was quite poor for this question, however credit was given to identification of the main elements. Some diagrams did not reflect what should be DFDs and ERDs and they were poorly presented and annotated. Not all candidates included names for the diagrams that were presented.
A1	
a)	The purpose of diagrams is to enable an analyst and user to depict the important elements of the system being developed. One way of identifying them in dataflow diagrams and entity relationship models is to read the scenario looking for important processes and deciding what data is to be stored to support these processes. Do not invent them. Simple diagrams indicating the candidate's understanding of the scenario is required.
b)	An entity relationship diagram is the basis for data to be stored particularly in a relational database. These relationships form the tables and key attributes, bearing in mind the need for stability, no duplication, modification anomalies etc. Two simple models indicating one appropriate entity and its relationship with another is required.
c)	(i) A simple description of an object class and the modelling language supporting the processes is required. (ii) Give a brief definition and the techniques used. (iii) Types and short descriptions of prototypes is expected. It appeared that the majority of the candidates did not know what the examples given were as many either missed out some of the 3 parts in this question or did not give an answers at all.

Q2	Comment Too many candidates merely described the stages of a methodology without any references as to how these could be managed.
A2	
a)	A brief answer is required. The question indicates a large complex system which implies that system developer management need to be sure there is understanding of the initial overview (this is what is required) of the system discussing with the major stakeholders before embarking on feasibility studies and subsequent analysis and development.
b)	Only four fact finding techniques are required. There are several ways analysts can obtain facts i.e. requirements from users, stakeholders and interested parties. Brief description, advantages and disadvantages are expected.
c)	Managing a large project requires a qualified manager and needs meticulous planning. The question indicates which processes, areas and techniques this manager should follow and use in order to provide a successful project. No particular methodology is expected and although the stages are important the emphasis should be on management.
Q3	Comment This was the least popular question. Very few attempted part a, most could describe normalisation and some aspects of a database management system. Answers lacked structure but average answers were provided.
A3	
a)	Specification languages are used to succinctly describe a process. This part of the question is intended to show that there is an understanding of how to describe a process. Any narrative or graphical language is acceptable and open ended.
b)	The purpose and stages of normalisation to third normal form should be briefly described. Diagrams of relations are not expected.
c)	Database management software has been available for many years and holds a company's data in one place unlike separate files. The software is very sophisticated and has many functions which should be described. As 14 marks are available, these functions and techniques need to be detailed. Reasons for their use compared with separate files is expected so that the understanding of the software is portrayed.

Q4	Comment This was the most popular question. The majority of candidates could describe testing methods and security measures. Few identified other aspects of implementation.
A4	
a)	An important aspect of testing is a plan. As testing takes place throughout the development process, details of the various methods should be in logical sequence. These should be described not just listed.

	b)	Implementation is the process which takes place after the system has been developed and is ready for use. The system is not just loaded for the user, other aspects need to be considered. These need to be planned so the implementation can be a success. Very brief descriptions of what this plan should contain is expected.
	c)	Different security measures should be described for the data, hardware and internet access. Emphasise the importance of these measures.
Q5		Comment
		Answered 36.3% Passed 76.2% Average 55.8% A reasonable set of answers, but very little commentary on why the charts they were suggesting were appropriate for the function. A number of candidates suggested project management charts were appropriate and these were given no marks.

Q6	Comment
	Its was quite clear from marking the scripts that the majority of the candidates had not been taught what hypertext and hypermedia was, and were trying to guess. Many referred to the term media and simply did a 'note dump' on media. Very few answers suggested a nonlinear approach to navigation. It was also clear that nearly all the candidates could not explain what the Web2.0 term actually meant and most said it was a newer version of the Web.

Q7	Comment
	Lots of answers discuss hardware and the fact that hardware breaks down. Cost is irrelevant, functionality is relevant. A better awareness of disabled users must be included in answers from candidates. Most / some users, for example, can touch type, which does not require them to look at the keyboard. The same is true of a blind user, they can use keyboards etc.

Q8	Comment
	Candidates need to make sure they are clearly looking at the exam question, and where a question is split into 9 and 3 marks, you should do more in the 9 mark section than the 3 mark. The reverse was true for most of the answers. Also, candidates proved a list of disadvantages, which were not asked for. And therefore, wasting time answering a question that has not been set

	The candidates are beginning to get a better idea of what a managed cloud service provides but it is not: A backup and recovery site – unless of course that is what you are paying for The data can be deleted – the cloud provider will do what the contract states – so if the end user does not have transactional management support, data can be deleted and therefore lost. Improve performance to the end user – again depends on contract and what infrastructure is being used.
Q9	Comment
	Some candidates provided a paragraph of information on the words "big data". Not asked for in the question and awarded zero marks. The text in a question answer can be unstructured, but the answers to a questionnaire would not be classed as big data. The same being true of a multiple-choice questionnaire for Structured data. The text in a question answer is considerably easier to process that big data, and the point of this question was to focus on the type of data big data processes rather than the type of data a questionnaire generates.

Q10	Comment
	Candidates would benefit from reading the question thoroughly and structuring their responses clearly.

Q11	Comment
	A key fault within some answers was stating that a database has a primary key, it doesn't, a table has. A significant number of answers clearly understood what the terms mean but did not understand why we have constraints in database table. Very few answers explained why a foreign key is required. Numerous answers reference a relationship between the two tables but very few explained that is used to constrain the value in the foreign key to an allowable value from the primary key table Both not nulls and check constraints were answered poorly, especially in relation to the examples.

Q12	Comment
	A little more depth was required for answers provided. Perhaps what was missing was a more detailed view of ethical, moral and legal aspects of a code of conduct. A significant number of answers simply answered with a job description. The two, a code of conduct and a job description are completely different.