BCS Higher Education Qualification

Professional Graduate Diploma

October 2024

EXAMINERS' REPORT

Advanced Database Management Systems

Questions Report:

A1	
	Approximately 30% of candidates attempted this question of which around half achieved a passing grade.
	The challenge here was one of focusing on the questions; so, for example, the star and snowflake sub-question did not ask for details on data warehousing, but on two specific concepts and how they compare in a number of dimensions that are stated in the question. Answers often were very long without coming to the key points of answering the question. Precision of answers was a generic issue in this question; precision is about providing the important details and being clear in what they relate to. Many answers to question c) very often focused on EL, not touching the specific ask related to deleted data.
A2	
	Approximately 70% of candidates attempted this question of which around half achieved a passing grade.
	Marks were generally lost in missing details rather than the generic understanding. Saying that question b asked about optimisation techniques (e.g. indexes, early selection) not optimisation approaches (heuristic v cost based). A recurring challenge was with translating the query into the correctly ordered query tree (in some cases this was because they did not translate the query but built the tree that they believed would be best for performance).
A3	
	Almost all candidates attempted this question of which around ¾ achieved a passing grade.
	Answers generally showed good understanding, but most candidates focused on very few points in their arguments combined with much paraphrasing of the question. Part c was attempted by a smaller number of candidates; of those who attempted it some wrote queries on a view, not queries to create a view. This may indicate a lack of understanding of advanced SQL concepts.

B4	
	Approximately 75% of candidates attempted this question of which just over half achieved a passing grade.
	A common misunderstanding relating to graph databases was identified. Graph databases are not about mathematical charts (such as pie charts etc); they do not store those charts and neither do their store data in the form of charts. Part b asked answers were generally acceptable. However, some focussed on describing ACID which was not required for this question There were instances in part c answers where candidates were not able to differentiate between Two-Phase Commit and Two-Phase Locking. While both are database concepts, candidates should be able to discuss each in its own right.
B5	
	Approximately 65% of candidates attempted this question of which less than half received a passing grade.
	The problems were in the details and the focus on answering the actual posted question. For example, part b usually included the query part correctly but did not include any aspect of transaction control (e.g. start or commit). In part c, candidates dedicated time to writing about ACID. This meant the concept of atomicity in relation to the bank transaction (part b) was not covered in detail. Finally, candidates were expected to provide the implementation of a trigger. Similar challenges were identified with those seen in A3 and we saw the same struggle with advanced SQL ideas that I noted in A3 part c.