BCS Higher Education Qualification

Diploma

October 2025

EXAMINERS' REPORT

Database Systems

General Comments:

Generally, learners did fairly well, finding a good level of detail and precision in answering questions.
However, there were some questions and answers that lacked details, more information provided below.

Questions Report:

A1	85% of students attempted this question, and two thirds of those passed. There was generally a good understanding shown about fundamental concepts. ER diagrams were usually sensible, capturing most relevant detail – some learners got ER confused with various UML notations especially, and Use Case Diagrams. Part c) was not attempted by all and several answers showed incomplete designs.
A2	About half of students answered this question, of which two thirds passed. Basic SQL was done correctly by most, but explanations of NOT NULL could have been more to the point. The slightly more involved queries with complex joins or grouping operators caused more issues and many students missed the need to create the right joins between tables. Relational algebra was a weakness, with many struggling to express queries and the explanations for the given query were often not at business level, but described quite procedurally what happens.
A3	All students attempted this question and two thirds passed. 0-1NF was generally well understood, but not all picked up on all conditions for each normal form. Also, when creating 1-n relations, the foreign keys were sometimes the wrong way round. 3rd NF proved more challenging as many did skip 2NF and went straight to 3NF without really realising what they had done. Exploration of candidate keys and superkeys was weaker with many not answering and answers often being wrong.
B4	This was addressed by 75% of students and was one of the weaker questions, with less than half passing. Graph databases were somewhat

	understood but the node-edge pattern was not recognised by quite a few answers; many students did not consider queries on graph databases. Some answers lacked clarity and strength of argument as to why RDBMS is not ideal for the social network scenario. Answers to data independence lacked precision. In the final part many students explained the concept of a view but NOT how Views can help with data independence.
B5	This was only attempted by 30% of students, but most did gain passes. Most students answered the questions on establishing RBAC constraints well. Part b) was not attempted by many, but those who did lacked some obvious choices such as two factor authentication in their answers.
B6	Students struggled with this question – very few attempted it, with answers lacking detail, sub-questions not being answered and crucially misunderstandings what 2PL is, how it differs from 2PC and that locking as concurrency control mechanism has nothing to do with database security.