BCS Higher Education Qualification

Diploma

April 2025

EXAMINERS' REPORT

Systems Analysis and Design

Questions Report:

A1	
	Part a) This part was relatively well answered with many candidates being able to identify suitable use cases. However, some candidates did not sufficiently describe them. A few candidates identified incorrect use cases. Part b) Many candidates were able to draw reasonable use case diagrams. However, some diagrams were wrong e.g. wrong notations were used, etc. Part c) Only a few reasonable answers were provided i.e. detailed descriptions of use cases had a right format, appropriate notation was used etc.
A2	
	Part a) Many candidates were able to explain the role and position of SAD within the broader context of the SDLC. Some answers however were insufficient. Part b) Most candidates answered this part sufficiently well. The best answers concerned Requirements Gathering. Part c) This part was poorly answered. In particular, most candidates insufficiently described roles of Business Analysts and System Architects.
A3	
	This was definitely the least popular question, and it was poorly answered. Part a) This part was answered reasonably well. Part b) This part caused many problems. Most candidates answering this question confused principles with practices of XP.
B4	
	This question was popular and generally well-answered. The first part of the question deals with normalisation; most candidates demonstrated an understanding of the process and were able to show how the case study data could be taken through the main three normal forms. The second section dealt with entity modelling and most candidates were able to present an entity model consistent with their answer to the first part of the question.
B5	
	This question was less popular than B4 but was also generally well answered. A few candidates confused association with aggregation or gave examples of aggregation that would have been better represented as composition. The visual differences between the relationships are subtle, and the conceptual distinctions require careful thinking about object lifecycles and ownership.

	In the second part of the question, most candidates recognised that class diagrams include both structure and behaviours, whereas ERDs focus only on the data and how it's related. Most candidates understood that Class diagrams are used in object-oriented design to show classes, their attributes, methods, and relationships like inheritance, association, and composition. In contrast, ERDs are used in database design to model data entities, their attributes, and relationships such as one-to-many or many-to-many, focusing purely on data storage without behaviour.
B6	
	In the first part of this question, most candidates were able to explain that sequence and communication (or collaboration) diagrams both model object interactions in a system. The discussion that they differ in focus and layout was less clear. For full marks, candidates had to explain that Sequence diagrams emphasise the time order of messages, showing how interactions unfold vertically over time whereas Communication diagrams, focus on the structural relationships between objects and the sequence of messages is indicated with numbering rather than time flow. The key point that most candidates missed is that both show the same information—object interactions—but from different perspectives: temporal (sequence) vs. structural (communication). In the second part of the question, there were some very good answers, but some candidates presented activity or communication diagrams instead of the requested sequence diagram. Where sequence diagrams were presented, these sometimes included incorrect lifelines, vague or misdirected messages and there was a tendency to ignore creation or return flows.