

**Comments** Q1 This proved to be an exceedingly easy question, with a very high average mark of ~76%.

There were no systematic misunderstandings.

The subpart that proved most difficult was the one that asked that the result set were shown. There were too varied small misunderstandings but none sufficiently systematic to deserve comment here.

Question 2

Most parts of the question required the student to simply remember concepts and techniques and problems explained during the lectures, which can be found in the suggested reading material. Unfortunately, many students failed to remember the concepts and scored poorly.

Q3 This proved a much harder question than Q1, with an average mark of ~53%.

There were several systematic mistakes in this question.

Minor ones were in Part (a), as follows: some students forgot to answer step-by-step, and some did but forgot to state which steps weren't applicable.

Another minor problem was to confuse the importation of a primary key because there is a weak entity that, by definition, lack one, as opposed to because there is an inheritance hierarchy linking two entities, one of which is subset of another.

More serious mistakes happened in Part (b), as follows. Rather than, as explicitly requested, focus on \*missing\* information to complete the diagram (e.g., participation and cardinality constraints on relationship types), many students proposed questions whose answer would bring out \*additional\* information (e.g., new relationship types, or new attributes, or new entity types).

Another, even more serious, problem in Part (b) were caused by students suggesting questions whose answer would yield information that cannot be captured in an EER model (e.g., domain-specific constraints of the kind that one needs triggers to capture them with).

Finally, in Part (c) the most common and frequent mistake was to forget that, in SQL, aggregation functions (such as SUM) appear in the SELECT clause, and that, therefore, one of the terms in comparing with the van weight capacity needs to be a full join aggregation subquery whereby one projects out the sum of the weights of of all packets that have been assigned to a van).

Abbreviations Used in Marking Questions 1 and 3

G, VG, VVG = generous, very generous, very very generous

NAQ = not answering the question

NED = not enough detail

NCE = not convincing enough

NMR = not meeting requirements of the question

ENM = possible extension of the model, not missing information NER = not normally capable of being captured in an EER model

Question 4

This question was not very popular and was disappointing in terms of marks, as the majority of students who chose to solve it failed to remember important concepts in transaction management, and normalization, and to competently apply related techniques in the context of a use case.

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