2011 Paper 4 Question 6

Databases

(*a*) Describe NULL values in SQL.   [2 marks]

(*b*) Discuss **three** problems caused by the introduction of NULL values.
                                                                               [3 marks]

(*c*) Can schema normalisation decrease the need for NULL values in a database?
       Justify your answer.   [3 marks]

(*d*) What is a *referential integrity constraint* and where are such constraints
       typically enforced?   [3 marks]

(*e*) Discuss how schema normalisation can introduce the need for referential
       integrity constraints.   [3 marks]

(*f*) Describe the tradeoffs that a database designer needs to consider when deciding
       whether or not to store data in normalised or de-normalised tables. [6 marks]