2002 Paper 5 Question 8

Databases

(*a*) Describe the relational model of data.   [6 marks]

(*b*) Explain the following concepts in relational databases:

    (*i*)   entity integrity constraint;   [1 mark]

    (*ii*) foreign key and how it can specify a referential integrity constraint between two relations;   [4 marks]

    (*iii*) semantic integrity constraint.   [1 mark]

(*c*) (*i*)   What is a functional dependency?   [1 mark]

    (*ii*) Define Boyce-Codd Normal Form (BCNF).   [3 marks]

    (*iii*) Define Third Normal Form (3NF).   [3 marks]

    (*iv*) What is the relationship between BCNF and 3NF?   [1 mark]