

## 2002 Paper 12 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]