IB DIPLOMA PROGRAMME
PROGRAMME DU DIPLÔME DU BI
PROGRAMA DEL DIPLOMA DEL BI

INFORMATION TECHNOLOGY IN A GLOBAL SOCIETY
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PAPER 3

Tuesday 16 May 2006 (morning)

1 hour

INSTRUCTIONS TO CANDIDATES

- Do not turn over this examination paper until instructed to do so.
- Read the case study carefully.
- Answer all the questions.

*Answer **all** the questions.*

Refer to the Fitness Zone case study and to your own related research in responding to the following questions.

1. Each time a customer visits the fitness centre, the card is swiped and information is updated in the customer database. Two of the tables in this relational database are **customer** and **visit**. The customer table holds personal information about the customer and the visit table holds information about their visit to the fitness centre.

    (a) Identify **two** non-key fields in the customer table.   *[2 marks]*

    (b) Describe how the customer table and visit table are linked in this relational database.   *[2 marks]*

    (c) Identify **two** items of customer information that are updated in the visit table when the customer uses the swipe card to enter the fitness centre.   *[2 marks]*

2. Fitness Zone believes that investment in an expert system will improve the advice that it offers to its customers.

    (a) Describe **two** components of an expert system in a fitness centre.   *[4 marks]*

    (b) Explain **two** policies that the fitness centre should introduce when implementing the expert system for its customers.   *[4 marks]*

    (c) Using material from your personal research, evaluate ways in which an expert system could benefit the users of a fitness centre.   *[4 marks]*

3. Fitness Zone intends to open two more centres, one based in London and the other in Paris. The company intends to set up a VPN which will allow its customers to access various IT based services from their homes. They will be given a user ID and a password to enable this.

    With reference to the case study and using your own research, discuss the possible success of the following services.

    • Accessing customer fitness results using the VPN from home.
    • Updating customer fitness results when an existing customer uses the facilities during a visit to one of the other centres.
    • Setting up a personalised Web page for each customer on the Fitness Zone web site and providing the customer with relevant dietary advice.

    [12 marks]