MARKSCHEME

November 2006

INFORMATION TECHNOLOGY IN A GLOBAL SOCIETY

Higher Level

Paper 3

6 pages

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The following questions refer to the Dissan Hotel case study. Responses should include conclusions and specific examples from your research and investigation to the case study.

1. **Online hotel reservation systems require guests to use credit cards to pay for bookings**

   (a) **Identify *three* items of information from a credit card that are generally required by an online hotel reservation system.** *[3 marks]*

   Award [1 mark] for each item identified up to a maximum of [3 marks].

   Answers may include:
   - credit card number
   - expiry date
   - start date
   - security code
   - name of card holder.

   Reward other correct answers with the approval of the team leader.

   (b) **A padlock icon is sometimes displayed at the bottom right of a web browser window [Image]. Explain its significance.** *[3 marks]*

   Award [1 mark] for each comment up to a maximum of [3 marks].

   Answers may include:
   - secure web page
   - https
   - data entered onto a secure web page is unlikely to be intercepted
   - necessary for use with sensitive data / credit card details.

   Reward other correct answers with the approval of the team leader.

   (c) **Explain how the Dissan Hotel can ensure that Hotel guests' information held on its servers is secure, even if someone gains unauthorized access to the system.** *[3 marks]*

   Award [1 mark] for each point up to a maximum of [3 marks].

   Answers may include:
   - data is encrypted
   - explanation of encryption – such as data is transformed to make it unreadable
   - key required to decrypt
   - password protection on individual files / tables
   - appropriate reference to own research.

   ***N.B.** Reject just password protection unqualified.*

   Reward other correct answers with the approval of the team leader.

2.   **Hotels such as the Dissan are increasingly attempting to provide Internet connectivity for their guests. This can be achieved by the provision of WiFi.**

    (a)   **Define the term WiFi.**   *[1 mark]*

        Award [1 mark] for a correct definition.

        Answers may include:

- Wireless Fidelity
- the use of wireless / radio to connect devices

        Reward other correct answers with the approval of the team leader.

    (b)   **Identify *two* hardware components of a WiFi system other than the user's computing hardware.**   *[2 marks]*

        Award [1 mark] for each component up to a maximum of [2 marks].

        Answers may include:

- access point
- WiFi card
- router.

        Reward other correct answers with the approval of the team leader.

    (c)   **Guests often experience difficulties when using WiFi in hotels. Describe *two* common problems that guests may experience.**   *[4 marks]*

        Award [1 mark] for each problem identified to a maximum of [2 marks] and [1 mark] for each correct reason to a maximum of [2 marks].

        Answers may include:

- Problem: weak signal / interrupted service.
- Reason: access point too far away / signal blocked by walls.

- Problem: slow data transfer.
- Reason: low bandwidth / too many users sharing.

- Problem: others accessing your computer.
- Reason: computer security not set up correctly.

        Reward other correct answers with the approval of the team leader.

3. *Responses to this question should include specific examples from your research and investigation to the case study.*

The following reports can be produced by a hotel management system.
- room occupancy analysis (graphical and totals)
- room service (services ordered by guests in their rooms)
- customer sources (where customer heard about the hotel)
- evening meals (if applicable)
- best customers
- Internet bookings.

(a) **Choose *one* of the reports from the list above and explain how data may be captured for this report.**   *[3 marks]*

Award [1 mark] for identifying the nature of the data and up to an [additional 2 marks] for explaining how the data can be captured for the report. Candidates should be rewarded if they refer to their own research.

Answers may include:

Room occupancy
- registration details
- obtained from desk booking-in processes
- data extracted from computer system
- appropriate and relevant reference to own research.

Room service
- hotel staff make record of room service used
- guest signs chit
- hotel staff enter details manually
- appropriate and relevant reference to own research.

Customer sources
- customer fills in questionnaire
- field for recording source
- customer tells staff who enter details manually
- staff record details from agency
- appropriate and relevant reference to own research.

Evening meals (if applicable)
- details collected from waiter's notes
- waiter's list passed to accounts
- number of meals (of each type) served recorded by kitchen staff
- appropriate and relevant reference to own research.

Best customers
- customer details retained after customer leaves
- customers details looked up during booking process
- this allows repeat bookings to be recorded under customer id
- appropriate and relevant reference to own research.

Internet bookings
- field for recording nature of booking in customer records
- automatically entered by system if Internet booking
- data passed electronically to hotel by agencies
- appropriate and relevant reference to own research.

Reward other correct answers with the approval of the team leader.

(b) **Choose any *two* of the reports from the list above and discuss how they could help a hotel increase the profitability of the business. Include conclusions and specific examples from your own research and investigations.** *[11 marks]*

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Level 1	Only 1 report considered	1-3
Level 2	2 reports considered with comments about how they could affect profitability.	4-6
Level 3	2 reports considered with good explanation of how each could affect profitability.	7-9
Level 4	2 reports considered with good discussion of how each could affect profitability including conclusions.	10-11

N.B. *If no reference is made to the case study or research, cannot go above Level 1.*
N.B. *If reference is made to either the case study or research but not both, cannot go above Level 2.*