



STAMFORD COLLEGE

SCHOOL OF COMPUTER SCIENCES DIPLOMA IN INFORMATION TECHNOLOGY

STC209 : SYSTEMS ANALYSIS & DESIGN

Date : 6 November 2006 (Monday)

Time : 2.15 p.m. – 4.15 p.m.

Duration: 2 hours

Instructions to Candidates

Answer ALL questions.

Please ensure that this examination paper contains FOUR questions on TWO printed pages before you start the examination.

Books, papers and other written materials are not allowed to be brought into the examination hall. A candidate who violates the examination rules of Stamford College or commits a malpractice will be disqualified from the examination.

Candidates may use calculators provided the calculators give no printout, have no work display facilities, are silent and cordless.

Write your Examination Index Number on each page of your answer booklet.

Answer **ALL** questions.

Question 1

In Object-Oriented development, identifying the objects in the system is sometimes difficult. In order to make it easier, the “Object Think” approach can be adopted. Based on this approach, explain the following objects :

(a) A **tree** in a jungle

(7.5 marks)

(b) A **book** in a bookshop

(7.5 marks)

(Total = 15 marks)

Question 2

A Company introduces a web-based system for buying computers through the Internet. The requirements are:

- The customer uses the manufacturer’s online shopping web page to view the standard configuration of the chosen servers, desktops or portable computer. The price is also shown.
- The customer chooses to view the details of the configuration, perhaps with the intention of buying it as is or to build a more suitable configuration. The price for each configuration can be computed on the customer’s request.
- The customer may choose to order the computer online or may request that the salesperson contact him/her to explain the order details, negotiate the price, etc, before the order is actually placed.
- To place the order, the customer must fill out an online form with shipment and invoice address, and with payment details (credit card or check). After the customer’s order has been entered into the system, the salesperson sends an electronic request to the warehouse with details of the ordered configuration. The details of the transaction, including an order number and customer account number, are e-mailed to the customer, so that the customer can check the status of the order online.
- The warehouse obtains the invoice from the salesperson and ships the computer to the customer.

(a) Draw a Use Case Diagram by identifying possible actors and use cases involved.

(20 marks)

(b) Create a Class Diagram incorporating important Classes.

(20 marks)
(Total = 40

marks)

Question 3

(a) Define Project Management. Explain the responsibilities of a Project Manager.

(10 marks)

(b) Elaborate the four phases of the Unified Process Life Cycle.

(20 marks)
(Total = 30 marks)

Question 4

Develop an input screen layout with appropriate data fields for “Fill in Patient Information” form. [Note: Make your own assumptions to complete the screen design. Make sure that proper GUI components are shown].

(15 marks)
(Total = 15 marks)

- END OF PAPER -