UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
General Certificate of Education Ordinary Level

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

* 9 7 5 4 7 2 8 4 9 5 *

COMPUTER STUDIES **7010/32**

Paper 3 Alternative to Coursework **May/June 2013**

1 hour 30 minutes

Candidates answer on the Question Paper.

No Additional Materials are required.

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name on all the work you hand in.
Write in dark blue or black pen.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid.
DO **NOT** WRITE IN ANY BARCODES.

There is one compulsory question on this paper.

Each part must be answered in the space provided.

No marks will be awarded for using brand names of software packages or hardware.

You are advised to spend at least 20 minutes reading the information at the start of question 1 since this information is needed to answer all the sections in this question.
All answers must refer to this information system.

The number of marks is given in brackets [ ] at the end of each part question.
The maximum number of marks is 60.

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This document consists of **12** printed pages.

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For Examiner's Use

In this question you are asked to read about:

- an existing manual, paper-based system for people to book a cruise,
- the web-based semi-automatic cruise booking system that is intended to be introduced as a replacement.

You are given a description of both the existing and the intended new web-based computerised system.

Description of the existing system

People wishing to book a cruise are sent a brochure with pictures and details of the cruises available. There is a plan of each cruise ship in the brochure showing all the cabins available. Each cruise ship has several sailing dates and different types of cabin. Each cruise has a unique brochure number. A 50% deposit is required when the cruise is booked; the remainder must be paid 10 weeks before the cruise is due to start.

When a person wants to book a cruise they select a cruise ship and sailing date from the brochure; then ring up the company to ask if there are cabin(s) available for the cruise chosen. The telephone booking line is open Monday to Saturday from 08:00 to 20:00 hours.

A plan showing all the cabins available on the cruise ship is kept for each cruise showing the cabins that have already been booked and those still available. If the cabin(s) chosen are available then the booking is agreed; if they are unavailable then any other cabins available for that sailing are offered as an alternative.

When the booking is agreed, the following details are **always** required:

- cruise brochure number
- number and types of cabins booked
- names of people in the cruise group
- details of person booking the cruise
    - name
    - address
    - telephone number
    - email address

The following **may** be required:

- age of each child in the cruise group under 18

The plan of the cruise ship for that cruise is updated with the cabins marked as booked and payment for the deposit is taken using a credit/debit card over the telephone. A receipt for the deposit, confirmation of the booking and details of the cruise are posted to the person who has booked the cruise. The final payment is taken 10 weeks before the cruise is due to start.

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Description of the proposed web-based system

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The intention is to replace all the paperwork by introducing a web-based cruise booking system which will contain all the information described above. It will allow people to book their cruise online, process secure debit/credit card payments; receive receipts and other paperwork via email attachments.

The new cruise booking system will have a website that contains all the details that were available in the brochure. For each cruise, there will be a cruise ship cabin plan showing the cabins still available to book and the price of each cabin. There will be a search facility available so that cruises can be viewed by:

- cruise ship
- duration of cruise
- area of cruise
- price
- availability of cabins

In the new system, a person will use this website to choose a cruise. When the booking is confirmed and the deposit paid they will receive a receipt for the deposit, confirmation of the rental and details of the cruise via an email attachment. The final payment will be taken 10 weeks before the cruise is due to start.

A systems analyst is to be employed to review the existing manual method. The systems analyst will be responsible for drawing up an action plan for the new web-based system. This will then be designed, built, tested and implemented. Technical documentation will be produced. Six months after the introduction of the new system, a full evaluation of its performance will be made.

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[Turn over

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1 **(a)** The systems analyst has decided to use project management software to produce a Gantt chart to check the progress of this project.

Give **three** reasons why the systems analyst decided to do this.

Reason 1 .....

.....

Reason 2 .....

.....

Reason 3 .....

..... [3]

(b) To gather information about the existing manual system, the systems analyst decides to use a questionnaire for the people booking a cruise.

Explain why the method is appropriate in this case.

.....

.....

.....

.....

..... [2]

State **one** other method that the systems analyst could use.

.....

..... [1]

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(c) State **three** items of hardware (other than computer, keyboard and screen) someone may need to book a cruise online. Justify your choice for each item.

Item 1 .....

Reason .....

.....

.....

.....

Item 2 .....

Reason .....

.....

.....

.....

Item 3 .....

Reason .....

.....

.....

..... [6]

(d) State **four** features you would expect the website for cruise booking to provide. Justify why each feature is required on this website.

For Examiner's Use

Feature 1 .....

Reason .....

.....

.....

.....

Feature 2 .....

Reason .....

.....

.....

.....

Feature 3 .....

Reason .....

.....

.....

.....

Feature 4 .....

Reason .....

.....

.....

..... [8]

(e) Draw the following systems flowchart symbols.

For Examiner's Use

Process

Merge

Document output

Hard disk (file)

[4]

(f) Draw a systems flowchart to show how the web-based cruise booking system should work.

For Examiner's Use

Include:

- what happens when a person makes an enquiry
- what happens when a cruise is booked

[8]

(g) Write an algorithm, using pseudocode or a flowchart, which:

- asks how many children there are under the age of 18
- requests the name of each child under 18
- prints each name
- allows the name to be re-input if there is an error

For Examiner's Use

[7]

For Examiner's Use

(h) The systems analyst wants to ensure that the data collected when a cruise is booked is kept secure.

Explain what steps the systems analyst needs to take.

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..... [3]

(i) Describe a test strategy for the new web-based cruise booking system.

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..... [4]

(j) Give **two** sets of test data that could be used to test the booking process. Justify your choice for each set of test data.
A set of test data includes all the items required to make a booking.

For Examiner's Use

Set 1 .....

.....

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Reason .....

.....

Set 2 .....

.....

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.....

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.....

.....

Reason .....

..... [8]

For Examiner's Use

(k) State **three** methods that could be used to implement the new cruise booking system.

Method 1 .....

Method 2 .....

Method 3 .....

Choose the most suitable method from the three you gave above and explain why you have chosen this method.

Method chosen .....

Reasons for choice .....

.....

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.....

..... [6]

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UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
General Certificate of Education Ordinary Level

COMPUTER STUDIES **7010/32**

Paper 3 Alternative to Coursework Scenario **May/June 2013**

INFORMATION FOR THE EXAMINATION IN 2013

This scenario should be given to candidates
at least 4 weeks before the examination.

No Additional Materials are required.

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READ THESE INSTRUCTIONS FIRST

This scenario should be given to candidates at least 4 weeks before the examination.

Candidates may consider the scenario in preparation for the actual examination.

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The Alternative to Coursework general scenario is:

web-based cruise booking system

The question paper will contain a full description of a computer-based sample project based on the general scenario given above. Candidates will answer questions on the sample project.

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