UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
General Certificate of Education
Advanced Level and Advanced Subsidiary Level

APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY

9713/02

Paper 2 Practical Test

For Examination from 2008

Specimen Paper

2 hours 30 minutes

Additional Materials: Candidate Source Files

READ THESE INSTRUCTIONS FIRST

Make sure that your **name**, **centre number** and **candidate number** are clearly visible on every printout, before it is sent to the printer.

Carry out **every** instruction in each task.

Before each printout you should proof-read the document to make sure that you have followed all instructions correctly.

At the end of the assignment put **all** your printouts into the Assessment Record Folder.

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

The businesses described in this paper are entirely fictitious.

This document consists of **6** printed pages.

[Turn over

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Read this scenario before attempting the paper

The South India Motor Company

The South India Motor Company manufactures motor cars and sells them through their own chain of showrooms. They also provide servicing for cars that they have sold to customers.

Their main factory in Bangalore uses computers to control the car production line. Computers are also used in the main factory for stock control and for production scheduling.

The offices in the main factory in Bangalore also deal with payroll for the whole company using the main computer system.

The factory in Bangalore has a research and development section designing and testing new cars.

The company would like to use a computer system to diagnose faults in their car engines.

The headquarters of the company is in Chennai (Madras). Here, there are many offices connected by a network of computers. These offices are used by different departments including:

- The Human Resources Department. They keep personnel records using a computer system, arrange for their employees basic health care and organise the training of all of the company's workers.
- The sales department takes care of sales, sales forecasts and the monitoring of competitors.
- The marketing department is responsible for marketing and advertising.

At the moment the departments using the offices in Bangalore and Chennai can only communicate using phone and fax (methods).

The company has a large number of car showrooms mainly in the area between Bangalore and Chennai. They communicate with the departments in Bangalore and Chennai using phone and fax.

There is a major showroom at Vellore. This deals mainly with farm vehicles.

Many travelling sales people are based at Vellore but spend much of their time travelling to farms trying to sell farm vehicles.

Because of traffic problems there have recently been a number of requests from office workers in Bangalore to be able to work from home. The management are concerned, however, that this would lead to an increase in expense due to having to pay travelling expenses:

- when workers had to bring their work into the main offices.
- getting workers together for meetings

You work as an ICT consultant for the South India Motor Company. You are going to test a trial database to record and extract the payroll details of the employees in the company.

1 Using a suitable software package, create a new database.

2 Import the files **SPEC2EMP.CSV**, **SPEC2BRN.CSV** and **SPEC2JOB.CSV**

You will need to use the following information to create the tables: [8]

SPEC2EMP

Field name	Type
PayNumber	Text
Name1	Text
Name2	Text
BranchCode	Integer
JobCode	Integer

🔑 denotes primary key

SPEC2BRN

Field name	Type
Code	Integer
Branch	Text
Address	Text
Weighting	Numeric: 2 decimal places

SPEC2JOB

Field name	Type
Job	Integer
Description	Text
Rate	Numeric: 2 decimal places

3 Print evidence of the three tables showing all of the field types. Make sure that the primary keys are clearly visible on your printout. Place your name, centre number and candidate number in the header of your pages. Save and print this diagram.

4 Establish the following One-to-Many Relationships:

SPEC2BRN.Code 1 ---- ∞ SPEC2EMP.BranchCode
SPEC2JOB.Job 1 ---- ∞ SPEC2EMP.JobCode [2]

5 Prepare a relationship diagram showing the relationships between these tables. Make sure that the relationship types are clearly visible on your printout (you may screen shot the editing of each relationship if necessary). Print your name, centre number and candidate number in the header of your relationship diagram. Save and print this diagram. [2]

6 Select only the full names, branch name and job descriptions of all the employees involved in any way with **Production**

You will need to use the *Description* field to find this information. [3]

7 Sort this extract in ascending order of *Branch* names. Add the title **Production workers** to this extract. Place your name, centre number and candidate number in the header of your extract. Save and print this extract. [3]

You are going to prepare a summary report which identifies employees in some job categories in selected sites.

8 Select from all the records only the details of employees where the Branch is **Chennai**, or **Bangalore** or **Vellore** and where the *JobCode* is less than **70** [3]

9 Using this data, create a cross-tab (pivot table) which shows *Description* as row labels and the branch *names* as the column headings. Show the number of employees for each job type in each branch. [6]

10 Add the title **Job categories at selected sites** to the report. Place your name, centre number and candidate number in the header of your report. Save and print this report. [1]

You are going to extract a summary report showing the salaries of employees in the maintenance department. To calculate the amount paid, the rate of pay is multiplied by a weighting.

11 Select from all the records only the details of employees with a *JobCode* of between **30** and **39** [2]

12 Create a field called **Pay** which is calculated at run time. This must calculate the *Rate* multiplied by the *Weighting* [4]

13 Select only the fields *PayNumber, Name1, Name2, Branch, Address, Description* and *Pay* [1]

14 Create a grouped report, grouping the data by *Branch*
In each group heading show the *Branch* and *Address*
In each detail row show the *PayNumber, Name1, Name2, Description* and *Pay*
In each group footer, calculate the total *Pay* for the group
In the report footer, place your name, centre number, candidate number and calculate the total *Pay* for the report [8]

15 Add the title **Rates of pay for maintenance employees** to the report. Ensure that the report fits on a single page. Save and print this report. [1]

A new version of this report must be created without personal data visible. The manager requires all names to be 'blacked out' and individual pay to be removed, without changing the totals.

16 Copy the report saved at step 15. On the new copy, change the title to **Maintenance employees summary** [1]

17 Remove the employee's names by setting the background of ONLY the names to black. Remove the individual pay figures by making these invisible. Ensure that all other parts of the report are still visible. Save and print this report. [4]

The manager requires a graph to compare the number of employees and total wage bill at each of the smaller offices.

18 Select from all the records only the branches with a branch *Code* of **4** or more. Use this data to present the manager with a graph comparing the number of employees and total wage bill at each of the smaller offices. Select the most appropriate type of graph or chart to display the data. Make sure that each data set is scaled so that it is visible. Ensure that your chart is labelled. Place your name, centre number and candidate number on the chart. Save and print this chart. [13]

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The manager is considering changing the area weightings for employees' wages and wishes to try a different model using a spreadsheet with only a small selection of employees.

19 Using a suitable software package, load the file **SPECAS2.CSV**

20 Give the cell containing 0.853 the name **ONE**, the cell containing 1.02 the name **TWO** and the cell containing 1.08 the name **THREE** [3]

21 Format all cells in rows 1 and 4 to be centre aligned, 10 point, italic and emboldened. [2]

22 In the column headed *OfficeCode* enter a formula which extracts the numeric value from the eighth character of the *Reference*

You may add extra column(s) to help. [5]

23 In the column headed *Office* enter a formula which, using the *OfficeCode*, looks up the *Branch* from the external file **SPEC2BRN.CSV** [5]

24 In the column headed *JobCode* enter a formula which extracts the numeric value from the last three characters of the *Reference*

You may add extra column(s) to help. [4]

25 In the column headed *Rate* enter a formula which, using the *JobCode* looks up the rate from the external file **SPEC2JOB.CSV** [5]

26 In the column headed *Salary* enter a formula so that:

- If *OfficeCode* is 1 or 2, multiply the *Rate* by *THREE*

- If *OfficeCode* is 3, multiply the *Rate* by *TWO*

- If *OfficeCode* is 4 or more, multiply the *Rate* by *ONE* [7]

27 Replicate the formulae entered in steps 22 to 26 for every employee. [1]

28 Format the *Rate* and *Salary* columns so that they show Indian Rupees to 2 decimal places. [2]

29 Extract only the records where the *job code* is greater than **18** and less than **43** [2]

30 Create a header which says **Extract 1** and a footer which contains your name, centre number and candidate number. [1]

31 Save and print all details of this extract, adjusting the page layout if necessary so that the whole table fits on a single page. Make sure that the contents of all cells are visible. [2]

32 Change the wording of the header to **Formulae Used** [1]

33 Show only the columns in which you have used formulae. [1]

34 Print this extract in landscape format, showing all formulae instead of figures. Ensure that all formulae and labels are fully visible. Show row and column headings. [2]

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The company owns a website with a URL of www.southindiamotors.biz

This advertises the company's products. In recent weeks another website has appeared with a URL of www.southindiamotors.net

This website pretends to advertise the company products but gives some comparisons with other vendors' products which are not very favourable.

35   The board of directors are very upset with this new website. You must word process a brief, single page report to be given to the press explaining why websites are not always what they appear to be. Identify any features of the website which would show its lack of credibility. Your report will be less than 300 words. Place your name, centre number and candidate number on the report. Save and print this report.   [15]

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