B012

National Council for Vocational Awards

0814

Database Methods Level 2

Practical Examination

MONDAY 20 MAY 1996

9.30 A.M. - 11.30 A.M.

INSTRUCTIONS TO CANDIDATES

1. Attempt all five tasks.

2. Read the paper throughout before you attempt any of the tasks. Also read the section below on the terminology used in this examination paper.

3. Enter your name and examination number clearly on all printouts.

4. Printing may be carried out after the time allowed for the practical examination but no alteration may be made to the saved files.

TERMINOLOGY USED

You should note that the term **database structure** will be used to describe the template used to create the database in the package you are using. For example, in dBase it will refer to the database file structure and in Microsoft Access it will refer to the TABLE structure. Also the term **data set** will be used to describe the actual data in the database, i.e. the records.

CHECKLIST OF REQUIREMENTS:

At the end of the Examination you should have the following items:

1. Database Structure Form (filled in by hand) from task 1.
2. A database structure called CASUALTY from task 1.
3. A data entry screen (FORM) from task 2. This will be corrected during the examination.
4. A listing showing all the data entered from task 2.
5. A listing showing mailing labels in sorted order from task 3.
6. Two printouts that result from queries at task 4 and a full listing of the database resulting from task 4.
7. A database called CAQUERY from task 4.
8. A listing showing a report for St. Paul's Casualty Dept. This is from task 5.

INTRODUCTION:

The Casualty Department of St Paul's Hospital receives over 200 patients on a busy day. Patients will present for a variety of reasons ranging from road traffic accidents (RTA) through to suspected heart attacks. As each patient arrives s(he) is assigned to one of the consultants working in the Casualty Department. Upon examination the consultant will record the initial diagnosis and decide what further action should be taken. This action will be one of the following:-

- admit the patient to one of the hospital's wards
- refer the patient to the X-RAY department
- discharge the patient.

For the purpose of maintaining accounts the hospital also needs to establish whether or not the patient is a member of VHI and to keep records of the charge for the consultation. This charge will be recorded as follows:

1. When the patient presents by him/herself the charge is 10 pounds.
2. When the patient is taken to hospital by ambulance the charge is 50 pounds.

The patient may, of course, decide to pay all or part of the payment at the time he/she arrives. The amount recorded in the charge field is therefore the balance owed.

The casualty department wants to maintain these details on a database.

Task 1   (4 marks)

From the database field layout provided in Figure 1, create a structure appropriate to the database package you are working with (for example, a database file structure in dBase or Table in Microsoft Access), to store the data provided in Figure 2, using appropriate field names and data types. Write out this structure on the form provided and save the structure with the name 'CASUALTY'.

Figure 1.

Name of Field	Data Type	Width
Record Number	?	?
Date	?	?
Name	?	?
Address	?	?
Consultant Name	?	?
Initial Diagnosis	?	?
VHI member?	?	?
Charge	?	?
Action Taken	?	?

Task 2 (8 marks)

Design and create a data input screen (FORM) and then use the data input screen to enter the sample data shown in Figure 2 into the database structure 'CASUALTY' created in task 1.

With regard to the data input screen you should follow these guidelines:

a) All fields must have suitable field labels.
b) The input screen should have a title on top and centred.
c) There is no need for borders or other effects.

Your invigilator will award marks to your screen design during the examination.

Figure 2

Record Number	Date	Patient's Name	Address	Consultant	Initial Diagnosis	VHI	Charge	Action Taken
00001	23/11/95	Bob Dunne	W'Ford	Dr. Davies	RTA	Y	50.00	XRAY
00002	23/11/95	Steve Smith	Dublin	Dr. Martin	Heart Cond.	Y	10.00	ADMIT
00003	23/11/95	Jane Dawe	Dublin	Dr. Byrne	Scalding	N	0.00	DISCHARGE
00004	24/11/95	Mark Roe	Galway	Dr. Davies	RTA	Y	50.00	ADMIT
00005	24/11/95	Mary Murray	Sligo	Dr. Martin	RTA	N	10.00	DISCHARGE
00006	24/11/95	Michelle Black	Dublin	Dr. Martin	Heart Cond.	Y	50.00	ADMIT
00007	25/11/95	Jenny Smith	W'Ford	Dr. Davies	RTA	Y	10.00	XRAY
00008	25/11/95	Ruth Byrne	Cork	Dr. Byrne	Heart Cond.	N	10.00	ADMIT
00009	26/11/95	Martin Keane	Cork	Dr. Davies	Unknown	N	50.00	ADMIT
00010	26/11/95	Pat Smith	Ballina	Dr. Martin	Heart Cond.	N	10.00	DISCHARGE

note: in the case of the VHI field you may substitute __Yes__ for Y and __No__ for N if this is appropriate for the package that you are using.

Print the data set either now or at the end of the examination.

Task 3 (12 marks)

The Accounts Officer in St. Paul's wishes to send invoices *only to those patients who have either been admitted to one of the Hospital's wards or sent for X ray*. You are asked to produce these mailing labels. For logistical reasons the Accounts Officer requests that the labels be printed in a particular sequence:-

1. Ascending order on the consultant field (primary sort field)
2. Descending order on the charge field (secondary sort field)

Each label should show the date as well as the patient's name, address and record number.

The actual printing of the labels can take place at the end of the examination if you so wish.

Task 4   (13 marks)

Before attempting tasks 4(a) through 4(d) below, make a copy of your original data set (entered at task 2) with the name 'CAQUERY'. Then, using this data set:-

(a)   Find and print (now or later) all records for patients who are members of the VHI. **Write the query condition you used on the listing**.

(b)   Substitute all occurrences of the value 50.00 in the charge field with the value 30.00.

(c)   Find and print (now or later) all records for patients who owe more than £20.
         Write the query condition you used on the listing.

(d)   Delete all records for patients who have been discharged.

Print the resulting database now or later.

Task 5   (13 marks)

Using the original database created in tasks 1 and 2, design and print a report that shows for all records the following fields (and in the order listed)

- Patient's name
- Patient's address
- Consultant in attendance
- Diagnosis
- Action Taken
- Charge

The report should be headed 'St. Paul's CASUALTY Report' and should show the print date. Choose suitable titles for each field listed above. The Charge column should be totalled.

Database Structure Entry Form

Field Name	Data Type	Width

Name: _____

Examination Number: _____

Date: _____