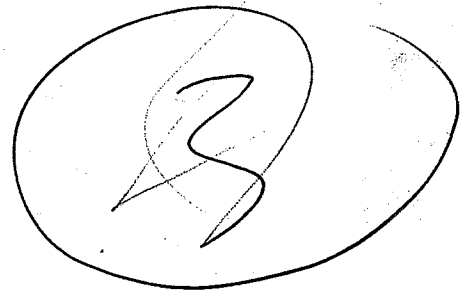




ZIMBABWE



**MINISTRY OF HIGHER AND TERTIARY EDUCATION
HIGHER EDUCATION EXAMINATIONS COUNCIL
(HEXCO)**

HIGHER NATIONAL DIPLOMA

IN

INFORMATION TECHNOLOGY

**SUBJECT: Visual C++ Programming
(Practical)**

PAPER NO: 710/S05B

NOVEMBER 2011 EXAMINATION

REQUIREMENTS

Visual C++ compiler, PC, Printer MS Office

INSTRUCTIONS TO CANDIDATE

Answer ALL questions

This paper consists of 3 printed pages.

QUESTION 1

- (a) Write a win 32 console program to find whether the given number is prime or not. (15 marks)
- (b) Write a program to print the Fibonacci series up to the limit value. take the limit value as input from the user. (10 marks)

QUESTION 2

- (a) A program to display combinations of 1,2 and 3.

The output should be as follows:-

123
132
213
231
312
321

1x1 = 1
1x2 = 2
1x3 = 3 2
1x5 = 5 2
1x7 = 7 4
1x11 = 11 2
1x13 = 13 4
1x17 = 17 2
1x19 = 19 2
1x22 = 22

(15 marks)

- (b) Write a program for searching a given number in a set of 10 numbers and print how many times the searched number occurs. If the searched number is not found display an appropriate message. (10 marks)

QUESTION 3

Write a program that creates a file and store the following details of a student

FirstName[30]; LastName[30]; Age;

The program should then read the record and display it on the screen. (25 marks)

QUESTION 4

Develop the following student payments database management information system user interface and link it to the student payments table designed in Ms Access. Code the control buttons to enable the user to add records, edit records, delete records and clear the edit boxes. The OK button terminates the system. The payment table should have 10 records.

User Interface

Data base Management

Student Payment Details

Receipt No.

Student Id.

Student Name

Surname

Amount Paid

Database Controls

Edit Delete Refresh/Rowset Requery mpSet → cancel

Payments Table

ReceiptNumber	StudentId	StudentName	StudentSurname	AmountPaid
12345H	H1012240U	Joseph	Chourombo	600.00
12345J	H1012241U	Susan	Chombo	700.00
12345Y	H1012240U	Thomas	Taapatsa	800.00
12345T	H1012240P	Taisireva	Muzvare	700

(25 marks)

...../cn

```

int binarySearch(int sortedArray, int key)
{
    while (first <= last)
    {
        int mid = (first + last) / 2;
        if (key > sortedArray[mid])
            first = mid + 1;
        else if (key < sortedArray[mid])
            last = mid - 1;
        else return mid;
    }
    return -(first + 1); // Failed
}

```