THE OPEN UNIVERSITY OF SRI LANKA
B.Sc DEGREE PROGRAMME: LEVEL 03
CLOSED BOOK TEST 2: 2015
CPU 1141: **INTRODUCTION TO COMPUTER PROGRAMMING**
DURATION: **ONE HOUR** (1 HOUR)

Date: 01st March, 2015 Time: **1.00 pm –2.00 pm**

Answer ALL Questions

Q1.

a) The following declaration is given,

```
VAR
Smile, Cry, Expression: BOOLEAN;
BEGIN
        Smile: = True:
        Cry: = False;
```

By considering the above declaration, write down the output of the following.

(i) Expression:= Smile **AND** Cry;
(ii) Expression:= Smile **OR** Cry;
(iii) Expression:= Smile **NOT** Cry;
(iv) Expression:= **NOT** Smile **AND** Cry;

b) What are the rules we have to consider when naming Pascal programs?

c) Evaluate the following expressions if A=4 and B=6

(i) X:= A+3*2 – B/2
(ii) Y:= (A+3)*2 mod B/2
(iii) Z:= A*3 div B + B mod A

d) Convert the C program given below in to a Pascal program.

```
#include <stdio.h>
int main(){
      float a, b, temp;
      printf("Enter value of a: ");
      scanf("%f",&a);
      printf("Enter value of b: ");
      scanf("%f",&b);
      temp = a;     /* Value of a is stored in variable temp */
      a = b;        /* Value of b is stored in variable a */
      b = temp;
      printf("\n After swapping, value of a = %.2f\n", a);
      printf("After swapping, value of b = %.2f", b);
      return 0;
}
```

Q2. a) What are the differences between a Pointer and a normal variable?

b) Write the output of the following C program.

```
#include <stdio.h>
int main()
{
int *Ptr;
int C;
C= 15;
printf ("value of C: %d" ,C);
Ptr: = &C;
printf ("value of pointer Ptr: %d" ,*Ptr);
*Ptr=2;
printf ("value of C: %d" ,&C);
return 0;
}
```

c) Write a complete C program to create a Two Dimensional array called **arr** with 2 columns and 2 rows. The output should be display as below.

```
Value of arr [0][0] is 10
Value of arr [0][1] is 25
Value of arr [1][0] is 45
Value of arr [1][1] is 50
```