UNIVERSITY OF RUHUNA

BACHELOR OF SCIENCE (GENERAL) DEGREE LEVEL I EXAMINATIONS
DECEMBER 2016

COURSE: ICT 1b13 – COMPUTER LITERACY COURSE   Duration : 2 Hours

Answer four (04) questions only.

1.

    a) Briefly discus three different ways for controlling (minimize, resize and close) a window in the *Microsoft windows 7* environment.

(15 marks)

    b) Briefly describe three types of **Menus** in the Windows 7 environment.   (15 marks)

    c) Compare the components in the following pairs.
        (i)   Command Line Interface (CLI) Vs Graphical User Interface (GUI)
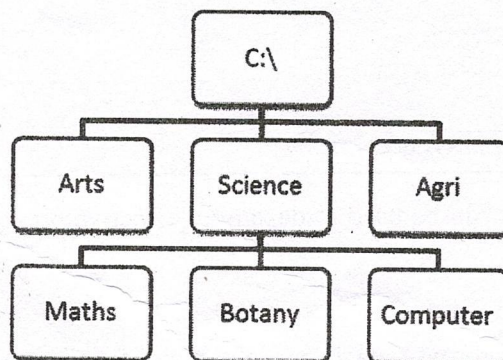   (ii) System software Vs Application Software

(20 Marks)

    d) Write short notes on followings.
        (i)   *Windows 7* libraries
        (ii) Three (03) methods of renaming a file/folder

(30 Marks)

    e) Consider the folder structure given below and answer the following questions.

        (i)   Write down the **absolute path** to folder "Maths"
        (ii) If the current folder is Botany write the **relative path** to the folder "Agri"

(20 Marks)

2.

a) Briefly describe the followings.

   (i)   Word Processing

   (ii)   Word Processor

   (iii) The Quick Access Toolbar in MS Word

   (iv) Document Views in MS Word
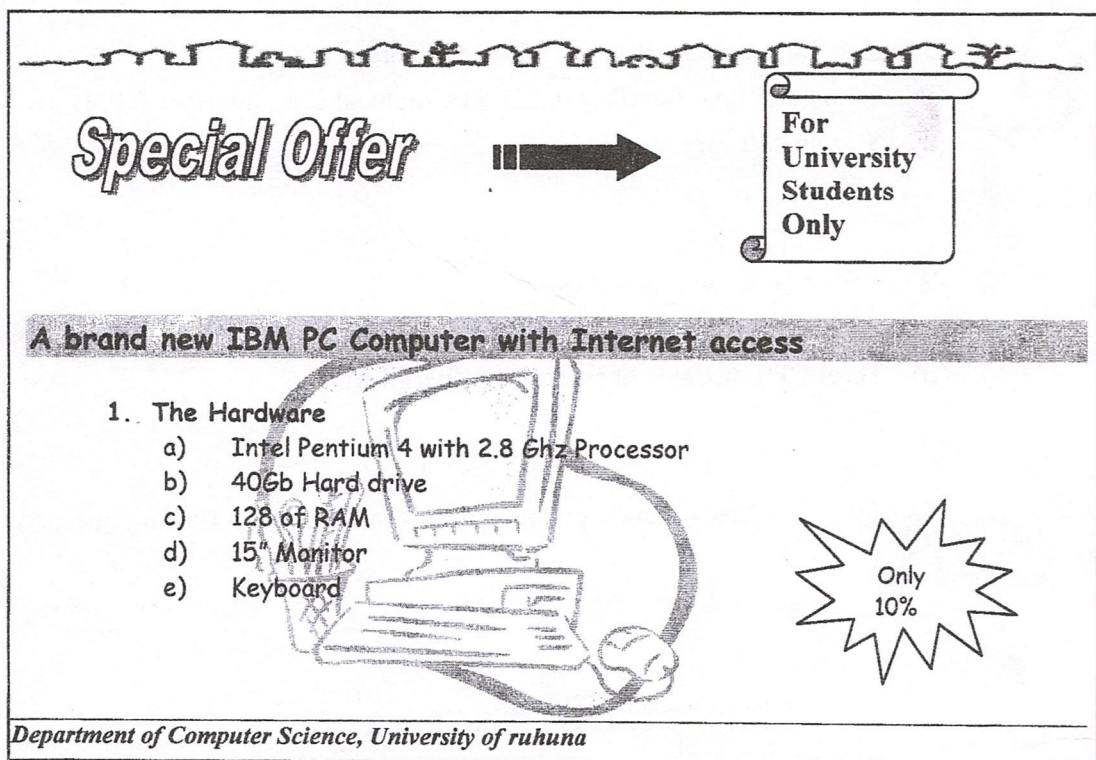
(20 Marks)

b) Write short notes on the following features available in MS Word.

   (i)   The Status Bar

   (ii)   Headers and footers

(10 Marks)

c) List *four (04)* important MS Word features used in the MS Word document shown below. (20 Marks)

Special Offer ➡ For University Students Only

A brand new IBM PC Computer with Internet access

1. The Hardware
   a) Intel Pentium 4 with 2.8 Ghz Processor
   b) 40Gb Hard drive
   c) 128 of RAM
   d) 15" Monitor
   e) Keyboard

Only 10%

Department of Computer Science, University of ruhuna

d) Describe **five (5)** features that can be used to design an effective presentation using MS PowerPoint.

(25 Marks)

e) **Text** is the basic method to present data in presentations. Briefly describe **three (03)** other methods that can be used to present data in a PowerPoint presentation.

(15 Marks)

f) List **two (02)** situation where hyperlink or action button could be used in a PowerPoint presentation.

(10 Marks)

Continue ......

3. Database Management System (DBMS) acts as an interface between application programs and the data accessed by them.

a) What is a Database Management System (DBMS)? (15 Marks)

b) Name four (04) MS Access database objects. (20 Marks)

c) Which of the followings uniquely identify a record in a data base?
   (i) Primary Key
   (ii) Not NULL constraint
   (iii) Foreign Key
   (iv) Field Name

   (10 Marks)

d) Which of the following is NOT a report section in a MS Access report?
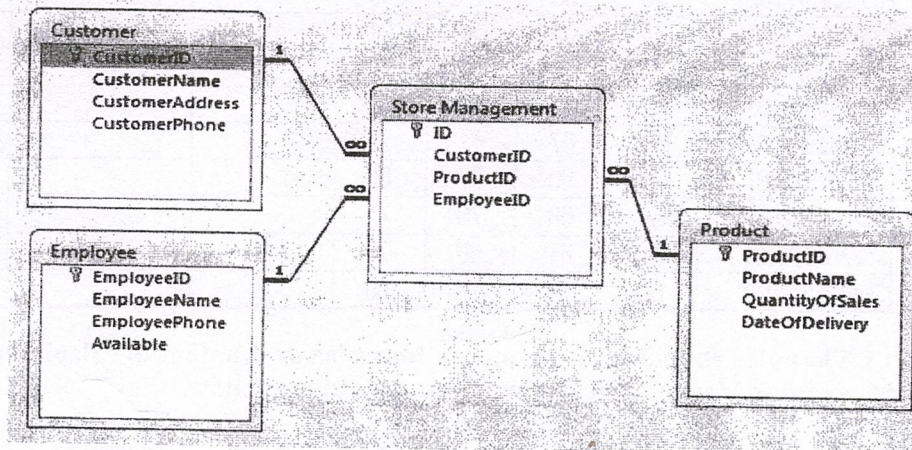   (i) Report Header section
   (ii) Summary section
   (iii) Page header section
   (iv) Details section

   (10 Marks)

e) Explain the use of queries in Database Management Systems? (5 marks)

f) Consider the following diagram that shows the relationships among tables in a database. Use the diagram to answer the questions given bellow.

   (i) What is the Primary key of the Product table?
   (ii) How many tables are joined in the above relationship?
   (iii) How many fields are there in the Employee table?
   (iv) Write the criteria required to list the employees whose names (**CustomerName**) begins with the letter **K**.
   (v) Suppose you need to retrieve Customers and Products delivered after 2016-01-01. Write criteria to retrieves the above information. List the most suitable field names that should be displayed in the result.

   (40 marks)

4.

a) Briefly describe the following terms with respect to **MS-Excel.** Use suitable **examples** where necessary.

    (i)   Cell address

    (ii)   Name Box

    (iii) Format Painter

    (iv) Formula

    (v)   Functions

    (vi) Comparison Operators

    (vii) Text Operator

    (viii)Arithmetic Operators

(40 Marks)

b) Consider **Table 1** in the worksheet given in the Figure bellow.

Table 1

	K	L	M	N	O	P	Q	R
3		Mark Sheet - 2016						
4	Index No	Sub-1	Sub-2	Sub-3	Sub-4	Total Marks	Average Marks	Rank
5								
6	SC/2015/2001	64	48	39	41	(a)	(b)	(c)
7	SC/2015/2002	58	55	71	43			
8	SC/2015/2003	34	53	40	61			
9	SC/2015/2004	29	33	31	46			
10	SC/2015/2005	31	28	24	34			
11	SC/2015/2006	44	67	61	77			
12	SC/2015/2007	26	90	67	85			
13	SC/2015/2008	54	66	70	71			
14	SC/2015/2009	78	81	69	72			
15	SC/2015/2010	68	74	78	80			

• *Note*: fill handler should be used to copy formulas or function to calculate: *Total Marks, Average Marks* and *Rank* in the equation given bellow.

Write formulas or functions to do the following calculations.

    (i)   Total Marks

    (ii)   Average marks

    (iii) Rank

    (iv) Average Marks of Sub-1

    (v)   Number of Students who Average Marks over than 62

(60 marks)

5.

a) Write short notes on the following concepts with respect to C programming language by giving examples for each.

    (i)   Variables

    (ii)   Control flow constructs

    (iii)   Arrays   (30 Marks)

b) There are five syntax and runtime errors in the C Program given below. Correct those errors in the program.

```c
#include <stdio.h>
#define PI 3.14159
main (){
        int radius;
        float cir,ar
        printf("Enter radius:");
        scanf("%c",radius);
        cir := 2*PI*radius;
        ar = PI*radius*radius;
        printf("Circumference of the circle :%c\n",cir);
        printf("Area of the circle :%.2f\n",ar);
}
```

                                                              (10 marks)

c) Write the output of the following C program.

```c
#include<stdio.h>
main() {
        int res;
        res = 11;
        res += 4;
        printf("\nResult of Ex1 = %d", res);
        res = 11;
        res -= 4;
        printf("\nResult of Ex2 = %d", res);
        res = 11;
        res *= 4;
        printf("\nResult of Ex3 = %d", res);
        res = 11;
        res /= 4;
        printf("\nResult of Ex4 = %d", res);
        res = 11;
        res %= 4;
        printf("\nResult of Ex5 = %d", res);
        return 0;
}
```

                                                              (10 Marks)

Continue ......

d) Write C language statements to do the followings.

    (i)   Declare an integer variable called X and assign value 10 to it.

    (ii)   Input a value from the keyboard to the character variable called "ch".

    (iii)   Declare constant called PI and assign the value 3.14 to that.

    (iv)   Declare and initialize an array of integer, which can hold the numbers: 50,20,15,35,49.

<div align="right">(20 Marks)</div>

e) Write a C program to compute the area of a square or a triangle. Program should prompt the user to type the first character of the figure name (S for square or T for triangle).
If the user input is "S", then the program should prompt the user to enter length of a side and the area should be calculated.
If the user input is "T", then the program should prompt the user to enter base and the height of the triangle and the area should be calculated according to the input values.
If the user input any other character, the program should display an error message.

    Note:

        • **Area of a Square = Side^2**
        • **Area of a Triangle= (1/2)*base*height**

<div align="right">(30 Marks)</div>

6.

a) Describe two repetition structures in C programming language by giving examples. Explain when to use them in a program.

<div align="right">(25 Marks)</div>

b) Rewrite the following code segments using *while loops* to get the same output.

    (i)

```
int i;
for(i=1;i<=10;i++){
        printf("Value of i =%d",i);
}
```
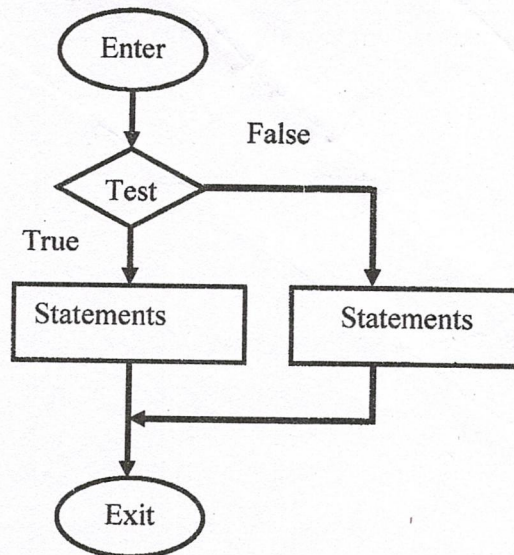
    (ii)

```
int i,j;
for(i=1; i<=5; i++){
    for(j=1; j<=5; j++)
            printf("*");
    printf("\n");
}
```

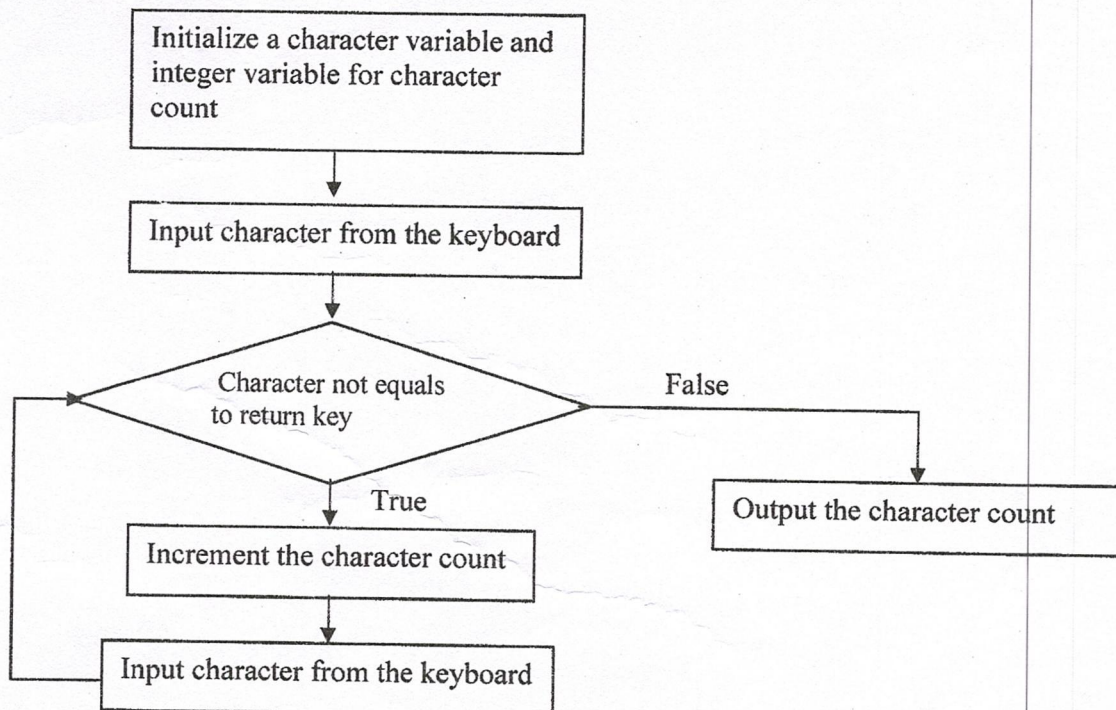<div align="right">(20 Marks)</div>

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c) Consider the following diagram related to one of the *control flow structures* and answer the questions below.

(i) There are two types of control flow constructs in C programming. To which type the above *control flow structure* belongs to?

(ii) Write the name of the *control flow structure* given above.

(iii) Write an example C code segment for the *control flow structure* you named in **c(ii)** above.

(30 Marks)

d) Write a C program to determine the length (number of characters) of a given message according to the flow diagram given below.

(25 Marks)

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