COMPUTER SCIENCE 2019

Time:20 Minutes.   Max.Marks:15

OPTION I PROGRAMMING USING C

SECTION"A" MULTIPLE CHOICE QUESTIONS

1. Choose the correct answer for each from the given options:

(i) This is not a loop:
- While
- For
- **switch**
- do-while

(ii) this is the format specifier for "int" variable:
- %x
- %c
- %f
- **%d**

(iii) This is correct statement:
- #include (stdio.h)
- #include <stdio>
- #include>stdio.h<
- **#include<stdio.h>**

(iv) This is a data type of MS Access:
- Int
- Float
- currency
- string

(v) The primary key in a database is:
- **Unique**
- Duplicate
- Null
- None of these

(vi) The function is used to write on to the computer screen in C:

- main ()
- clrscr()
- **printf()**
- getch()

(vii) It is not an Arithmetic operator:
- +
- /
- %
- **<=**

(viii) passing parameters/ arguments/ values of a function are:
- Square Brackets
- Curly Brackets
- **Parenthesis**
- Pair of Slashes

(ix) Computer cannot detect this error:
- Runtime
- **Logical**
- Absolute
- Syntax

(x) the scope of this type of variable is not Limited:
- Local variable
- Integer variable
- **External/global variable**
- Float variable

(xi) This object in MS Access is considered as primary object:
- Query
- Form
- Report
- **Table**

(xii) This keyword is used to exit from the switch statement:
- Case
- **Break**
- Else
- Default

(xiii) This object in MS Access is used to display data in printed form:
- Form
- Query

- **Report**
- Table

(xiv) Let α=0, the statement printf("%d",α++), will print this value:
- **0**
- 1
- 2
- 3

(xv) Primary key of another related table is called:
- Candidate key
- **Foreign Key**
- Alternate key
- Composite key

COMPUTER SCIENCE 2019

Time: 2Hours 40 Minutes.   Marks:60

OPTION I PROGRAMMING USING C

SECTION"B"SHORT ANSWER QUESTIONS(36)

NOTE: Answer any 12 questions from this section:

2(i) What is a programming error? Define Syntax error.
(ii) Write a C program to show the table of an inputted number
(iii) Write C program equivalent statements of any three of the following:

(a) $A=(x^2+y^3)-(x-y)^3$

(b) $B=y^2-2xy+x^2$

(c) $C= \dfrac{-y+\sqrt{y^2-4xz}}{2x}$

(d) $D= x^2 + y^3 + z^3-3xyz$

(iv) Write the basic structure of C programming language
(v) Differentiate between while loop and do while loop.
(vi) Define relational operators used in C language.

(vii) What is escape sequence define any two

(viii) Write the full form of the following:
- DML
- RDBMS
- DBA

(ix) What is the difference between primary key and foreign key?

(x) Cab reserved words in C language be chosen as variable names? Justify your answer.

(xi) Write any three advantages of DBMS.

(xii) Write a function that receives two integers and returns the maximum of the two.

(xiii) What is the role of DBA in DBMS?

(xiv) What will be the output of the given program statements?

```
for(intX=1;x<=5;x++)
(for(int y=1;y<=x;y++)
printf("%d",y);
printf("\n");
)
```

(xv) Identify valid variables or invalid variables of the following:
- number
- you&me
- case

(xvi) Rewrite the given statement correctly:

```
(a) if(a==b)then
    print("Karachi");
```

```
(b) for(int i=I, i<10,I++)
    printf("%d\n"i);
```

```
(c) integer i=5;
    i++;
```

(xvii) Write the steps to create a table in MS Access

(xviii) Define any three reserved words in C.

SECTION"C"DETAILED ANSWER QUESTIONS

NOTE: Answer 2 questions from the section.(24)

3(a) Explain all data types in C language.

(b) Define "Nested" for loop with example.

(c) Define any four objects of MS Access.

4(a) What are the input output statements in C programming language? Define any three with examples

(b) Define else if statement.How it is different from switch statement?

(c) Write the names of various types of database models. Explain two of these.

5(a) What is the function in C language? In how many ways can it be used?

(b) What are control structures in C language? Define iteration control structure give example.

(c) What is a relationship database? Define all three types of relationship databases.Give an example.

COMPUTER SCIENCE 2019

Time:20 Minutes.   Max.Marks:15

OPTION II PROGRAMMING USING VISUAL BASIC

SECTION"A"MULTIPLE CHOICE QUESTIONS

1. **Choose the correct answer for each from the given options**

(i) This index value of an array starts from:
- 0
- **1**
- -1
- 2

(ii) Variable whose scope is limited to particular function/procedure in which it is declared is called:
- **Local variable**
- Numeric variable
- Global variable
- Public variable

(iii) This is not used to choose only one option in Yes(1) or No(0):
- Combo button
- Power button
- **Check box**
- Square box

(iv)This is a loop in VB:
- IF-THEN
- **For-Next**

- Select-Case
- Goto

(v) This control button contains text edit field:
- List box
- **Check box**
- Combo box
- None of these

(vi) Attribute in a table is also called:
- **Field**
- Row
- Record
- Query

(vii) This is a block of statement that returns a value:
- **Function**
- Procedure
- Loop
- Array

(viii) This object in MS Access is used to present data in printed form:
- Form
- Query
- **Report**
- Table

(ix) this control accepts textual information from the user:
- **Text box**
- Combo box
- Label
- Caption

(x) Default property of first form is:
- Form0
- **Form1**
- Form
- None of these

(xi) The main purpose of using the primary key is:
- Speed
- **Uniqueness**
- Security
- Privacy

(xii) Option buttons are also called:
- **Radio buttons**
- Select buttons
- Push buttons
- Label buttons

(xiii) This is the extension of the project file in VB:
- .vbr
- .vbx
- .vbf
- **.vbp**

(xiv) The scope of variable refers to its:
- Name
- **Accessibility**
- Data type
- Value

(xv) Primary key of another related table is called:
- Candidate key
- Alternate key
- Composite key
- **Foreign key**

COMPUTER SCIENCE 2019

Time: 2 Hours 40 Minutes.   Marks:60

OPTION II PROGRAMMING USING VISUAL BASIC

SECTION"B" SHORT ANSWER QUESTIONS(36)

NOTE: Answer 12 questions from this section.

2(i) What are the characteristics of a composite key?
(ii) What is a function? How is it different from a subroutine?
(iii) Write the full forms of the following:
- DML
- SQL
- DCL

(iv) What is the role of DBA in DBMS?
(v) What do you mean by data dictionary?
(vi) Differentiate between public variable and private variable.
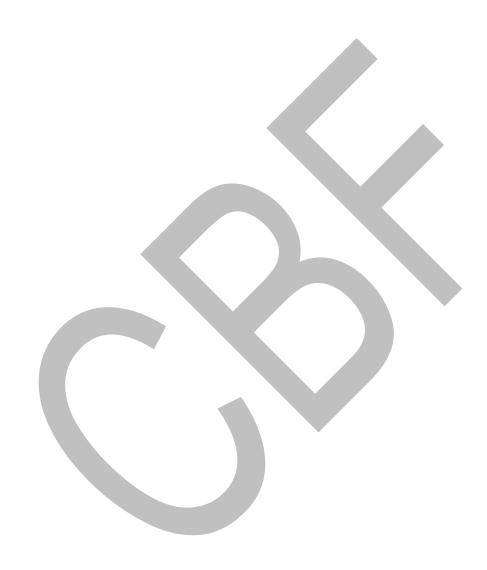(vii) Write programing statements in VB to display the following output:

1
12
123
1234
12345

(viii) What is combobox? List its properties.
(ix) Differentiate between primary key and foreign key.
(x) Write any three advantages of DBMS.
(xi) Write only the names of control structure used in VB.
(xii) Write a program in VB that displays the cubes of all numbers from 1 to 10.
(xiii) write the VB equivalent expression of the following:

(a) $d=2\sqrt{r}+1$

(b) $z=1+1$
$\quad$ x y

(c) $k=(a+b)^{\wedge}2$
$\quad$ a^2+b^2

(xiv) Write the steps to create a table in MS Access.
(xv) What are the advantages of Visual Basic programming?
(xvi) Define the term array in Visual Basic with syntax.
(xvii) differentiate between ADO And DAO.
(xviii) Define arithmetic operators used in Visual Basic.

SECTION"C"DETAILED ANSWER QUESTIONS(24)

NOTE: Answer any 2 questions from this section.

3(a) Explain data types used in MS Access.
(b) Explain a select case with an example.
(c) What is the relationship in the database? Define all three types of relationships in the database with examples.
4(a) What is MDI? Write its advantages.
(b) What is a listbox? How is it created?

(c) Explain any four objects in MS Access.

5(a) Explain the different tools available in the textbox.

(b) Write any four built in functions used in VB, also give their purpose.

(c) Explain any three types of database models.

COMPUTER SCIENCE 2018

Time:20 Minutes.   Max.Marks:15

OPTION I PROGRAMMING USING C

SECTION"A" MULTIPLE CHOICE QUESTIONS

1. Choose the correct answer for each from the given options:

(i) A character constant is a single character enclosed:
- In double quotation marks
- **In single quotation marks**
- In left and right braces.
- Without quotation marks

(ii) Comments or remarks can be placed anywhere within a program as long as they are placed within delimiters:
- by braces and asterisks (*comments*)
- by asterisks *comments*
- by parenthesis and asterisks (*comments*)
- **by slashes and asterisks/*comments*/**

(iii) The function void play (void) is the example of:
- Calling function
- Return function
- **A prototype declared as a function**
- Itself function

(iv) This operator has the lowest precedence:
- **
- %
- <
- **&&**

(v) This converts C program into machine language:
- **A compiler**
- An operating system
- A linker
- An editor

(vi) This function is used to read a character from a data file:

- putchar()
- **getc()**
- getch()
- getche()

(vii) Loop within the loop is called:
- **Nested loop**
- Continuous loop
- Inner loop
- Outer loop

(viii) The database tool is used to display and print your data in an organised manner:
- Record
- Field
- **Report**
- Table

(ix) This database model organises data into a tree structure:
- **Hierarchical**
- Relational
- Network model
- Object oriented model

(x) Each row in a table is also called a:
- Field
- **Tuple**
- Entity
- Attribute

(xi) This is Escape sequence:
- /n
- **\t**
- %f
- i++

(xii) this is the output of 4 % 5:
- 0
- 1
- **4**
- 5

(xiii) The specialised softwares necessary to create and process the database and modified as needed is called:
- Compiler

- Windows xp
- **DBMS**
- Interpreter

(xiv) The include <stdio.h> does not begin without a sign of:
- $
- !=
- **#**
- @

COMPUTER SCIENCE 2018

Time: 2Hours 40 Minutes.   Marks:60

OPTION I PROGRAMMING USING C

SECTION"B"SHORT ANSWER QUESTIONS(36)

NOTE: Answer any 12 questions from this section:

2(i) If x=1, what is the output of the following program segments?
Printf("x=%d\n",x);
Printf("x=%d\n",++x);
Printf("x=%d\n",x);

(ii) What is the difference between source program and an object program?
(iii) Determine which of the following are valid or invalid identifiers.
- Arrayl
- $tax
- name and address

(iv) What is the difference between arithmetic and arithmetic assignment operators?
(v) What is the difference between DBMS and RDBMS?
(vi) Write the full form of DCL, IDE and DBMS.
(vii) Write the name of objects in MS Access.
(viii) Define the following functions:
- Pow()
- sqrt()
- abs()

(ix) Write the print() statements of the following:
(a) Int a=4562
(b) float c=15.27
(c) char [ ] "intermediate class";

(x) Write the following in while() equivalent:
    Void main (void)
                {
                Int a=3;
                Do {print("%d\n",a);
                a=a+3;
                }
                While (a=10);}

(xi) Define relational database model.
(xii) Convert the following algebraic expression into C equivalent format:

(a) x=1 ab^4
       2

(b) x=-b+√b^2-4ac
         2a

(c) y=|b^2 -4ac|

(xiii) Write a C program to calculate the power of numbers from 1 to 5.
(xiv) what is the meaning of two void used in any function declaration?
        I.e void main(void)

(xv) What is wrong with the following C program:
    Void main(void)
    (
     Printf"Hoo what a wonderful shortl"
)

(xvi) Write a program that prints factorial of any inputted member.
(xvii) What is a composite key? Where do we use it?
(xviii) How can we define one to one relationship in a database?

SECTION"C" DETAILED ANSWER QUESTIONS

NOTE: Answer 2 questions from this section (24)

3(a) Define switch and break statement with an example

(b) Write the general form (syntax) of for () and while () loops.

(c) Explain why we use table, form and report in MS Access.

4(a) What are the different types of operators used in any C language program? Define any two types.

(b) Define different basic opening modes used to open a data file in C language.

(c) Why is DBMS necessary for any big organization?

5(a) Define function. What are the main characteristics of a function?

(b) Define different format specifiers used in any formatted function.

(c) Define the data types in MS Access.

COMPUTER SCIENCE 2018

Time:20 Minutes.   Max.Marks:15

OPTION II PROGRAMMING USING VISUAL BASIC

SECTION"A"MULTIPLE CHOICE QUESTIONS

1. Choose the correct answer for each from the given options

(i) This database model organises data into a tree structure:
- **Hierarchical**
- Relational
- Network model
- Object oriented model

(ii) Each row in a table is also called:
- Field
- **Tuple**
- Entity
- Attribute

(iii) A person who is responsible for managing the overall database management system is called:

- **Database administrator**
- Network supervisor
- System analyst
- Programmer

(iv) The translator translates the entire high level language program into machine code:
- Assembler
- **Compiler**
- Interpreter
- Debugger

(v) Visual Basic language is a/an
- Procedure oriented
- Mnemonic
- Machine
- **Object oriented/Event driven**

(vi) Each Record in either table is related to only one record in the other table. This relationship is called:
- **One to one**
- One to two
- One to many
- Many to many

(vii) It is a list of homogeneous data elements:
- Form
- Function
- Check box
- **Array**

(viii) A sub program which returns a value is called:
- **Function**
- Report
- Code
- Procedure

(ix) A variable whose scope is unlimited is called:
- Local variable
- Auto variable
- **Global variable**
- Ghost variable

(x) The text contained in a label control is stored in:
- Text

- **Caption**
- both text and caption
- Project

(xi) This type of loop runs only as long as the condition becomes false:
- Do while
- For next
- While Wend
- **Do Until**

(xii) This data type stores true/false value:
- **Boolean**
- Variant
- Number
- Text

(xiii) The database tool is used to display and print your data in an organized manner:
- Record
- Field
- **Report**
- Table

(xiv) This represents the relationship between tables:
- Primary key
- Secondary key
- **Foreign key**
- Alternate key

COMPUTER SCIENCE 2019

Time: 2 Hours 40 Minutes.   Marks:60

OPTION II PROGRAMMING USING VISUAL BASIC

SECTION"B" SHORT ANSWER QUESTIONS(36)

NOTE: Answer 12 questions from this section.

2(i) How can we select more than one control at a time?
(ii) What are the uses of VB form and immediate window?
(iii) State about event driven programming.

(iv) Why do we use form and report in MS Access?

(v) Write the few names of properties and methods that are commonly applied to most objects.

(vi) Write a program in VB that generates even numbers from 5 to 25.

(vii) Define network database model.

(viii) What is ActiveX in VB?

(ix) Define many to many relationship in VB

(x) What is the object to VB?

(xi) Write the steps to add control to the toolbox.

(xii) What is the main difference between do while and do until loops?

(xiii) Define variable with its scope

(xiv) Write a program that inputs a year and then checks whether it is leap year or not.

(xv) What is a composite key where do we use it?

(xvi) Why do we use memo field type in MS Access?

(xvii) Write the full form of the following abbreviation:
  ● DBA
  ● RDBMS
  ● OLE

(xviii) What do you mean by array in Visual Basic?

SECTION"C"DETAILED ANSWER QUESTIONS(24)

NOTE: Answer any 2 questions from this section.

3(a) What are the basic data types of VB? Explain their uses.

(b) Define relational operators and logical operators. Give their symbols and purpose in VB.

© Why does a primary key field contain a unique value for each record in the database?

4(a) Describe ADO data control.

(b) What are built-in functions in VB? Give any two examples.

© What is a database and why is it used in an organization?

5(a) Define selection control statement in VB.

(b) What is a loop? Define any two types of loops in Visual Basic.

© Define different types of key fields in the database.

COMPUTER SCIENCE 2017

Time:20 Minutes.   Max.Marks:15

OPTION I PROGRAMMING USING C

SECTION"A" MULTIPLE CHOICE QUESTIONS

1. Choose the correct answer for each from the given options:

(i) This arithmetic operator computes the integer remainder:
- **%**
- +
- -
- /

(ii) A top to bottom relationship among the items in a database is established by a:
- **Hierarchical Model**
- Network Model
- Relational Model
- Flat Model

(iii) This one of the following represents comment in C:
- <>
- [ ]
- /*/*
- **/* */**

(iv) A relational database developer refers to record as:
- A criteria
- A relation
- **A tuple**
- An attribute

(v) The format specifier starts with:
- **%**
- /
- \
- #

(vi) This MS Access object is considered primary:
- **Table**

- Query
- Form
- Report

(vii) = is an operator of this type:
- Logical
- Arithmetic
- **Assignment**
- Relational

(viii) Reserved word "case" is used with this statement:
- printf ( )
- scanf( )
- **switch ( )**
- getch( )

(ix) This standard I/O function is used to close a data file:
- gclose( )
- **fclose( )**
- fscan( )
- fcall ()

(x) This format specifier is used for double Precision value:
- %ld
- **%lf**
- %d
- %u

(xi) The quantities which may change during program execution are called
- Constants
- **Variable**
- Strings
- Integers

(xii) The 'break' statement is used to exit from this part of a loop:
- Beginning
- **Middle**
- End
- Never exit

(xiii) This is the default data type in MS Access:
- **Text**
- Auto number
- Number

- Data

(xiv) The '\n' character does this one of the following operations:
- double line spacing
- character deletion
- character backspace
- **place cursor on the next line**

(xv) # define PI 3.14159. this code represents this one of the following:
- **Preprocessor directive**
- Variable
- Constant
- Integer

COMPUTER SCIENCE 2017

Time: 2Hours 40 Minutes.   Marks:60

OPTION I PROGRAMMING USING C

SECTION"B"SHORT ANSWER QUESTIONS(36)

NOTE: Answer any 12 questions from this section:

2(i) What is a foreign key? Where do we use it?

(ii) What is the main difference between while and do while loop?

(iii) In which condition is one to many relationships used?

(iv) What is the output of the following program statements:

```
For(int a=1;a<5;a++)
{
For(int b=a;b<5;b++)
printf("%d",b);
printf("\n");
}
```

(v) What do you mean by function prototype?

(vi) what is operator precedence? Write the precedence of arithmetic operators.

(vii) Write a program that swap two inputted numbers

(viii) Write the full form of the following:
- SQL
- DML
- DDL

(ix) How is the else-if ladder different from switch statement?

(x) What is a data dictionary in DBMS?

(xi) What will be the output of the following program:

```
void main( )
{
int=5;
if(n<1)
printf("hello");
if(n==5)
printf("hi");
else
.    printf("no");
}
```

(xii) Write the equivalent code of the following statement in while loop format:

```
for(a=1;a<=100;a++)
printf("%d\n",a*a);
```

(xiii) Define an increment or decrement statement in C.

(xiv) Define the following file opening modes in C:

(a) "r"

(b) "w"

(c) "a"

(xv) Debug the following program:

```
void main void
(
printf('I am a good programmer');
)
```

(xvi) Write a program to calculate the area of a rectangle(Hint A=w x h)

(xvii) What do you mean by reserved words in C language?

(xviii) Write equivalent C statement:

(a) x= b^2-c^3
        2bc

(b) b=√x+y+z^3

(c) z=4/3 πr^3 where π=3.14

SECTION "C" DETAILED ANSWER QUESTIONS

NOTE: Answer 2 questions from this section (24)

3(a) What is meant by control structure? Discuss selection control structure.
(b) Define database. Define the major data types used in MS Access.
© What is the purpose of a break and continue statement?
4(a) Define the data types of C
(b) Define Network Model. Where do we use it?
(c) Define formatted I/O and unformatted I/O functions.
5(a) Define any four objects of DBMS.
(b) Define for loop with an example.
(c) What is a function? Define its importance in C language.

COMPUTER SCIENCE 2017

Time:20 Minutes.   Max.Marks:15

OPTION II PROGRAMMING USING VISUAL BASIC

SECTION "A" MULTIPLE CHOICE QUESTIONS

1. **Choose the correct answer for each from the given options**

(i) When the variable scope is limited to a procedure it is called:
- Global variable
- **Local variable**
- Host variable
- Main variable

(ii) The property that changes text color is:
- Back color
- Font color
- **Fore color**
- Text color

(iii) The project file of Visual Basic has one of the following extensions:
- .frm
- **.vbp**

- .ocx
- .ham

(iv) the default name property of first form is:
- Form
- **Form1**
- Form0
- Form10

(v) This MS Access object is considered primary:
- **Table**
- Query
- Form
- Report

(vi) The number of data type supported by MS Access is:
- Ten
- **Eight**
- Four
- Two

(vii) Reserve word DIM explicitly declares:
- **Variable**
- Constant
- Keyword
- Function

(viii) This method is used to hide a form:
- hide.hide
- **formname.hide**
- hide.form
- up.hide

(ix) An Array index value start from:
- 0
- -1
- **1**
- +2

(x) This control structure compares one expression to multiple expression:
- if...Then
- if...then...else
- **Select...Case**
- For...Next

(xi) The database model allowing Query through SQL is:
- Network
- Hierarchical
- **Relational**
- Flat

(xii) The most common object in VB is:
- Report
- **Form**
- File
- Code

(xiii) A subprogram which returns a value is called:
- Procedure
- Module
- **Function**
- Object

(xiv) This control selects a single choice from a Data group:
- Check box
- **Option button**
- Caption box
- List box

COMPUTER SCIENCE 2017

Time: 2 Hours 40 Minutes.   Marks:60

OPTION II PROGRAMMING USING VISUAL BASIC

SECTION"B" SHORT ANSWER QUESTIONS(36)

NOTE: Answer 12 questions from this section.

2(i) Distinguish between local variable and global variable.
(ii) Define the term function. How does it differ from a subroutine?
(iii) How is VB connected with a database? Write all the steps.
(iv) What will be the value of 'a'
(i) Dim a as float
   a=5/2

(ii) Dim a as string
.   a=5+2
(iii) Dim a as integer
     a= 5x2

(v) How does case structure differ from else if statement?
(vi)What is wrong with the following VB statement?
(a) Dim a [5] a=mileages
(b) For a=1 to 5 step 2
    Begin
        b=b+a
        end
(c) If(a<b)
    b=a
.   end if

(vii) Write a program in Visual Basic that finds the largest number among three inputted numbers.
(viii) Write a program in VB that generates the following series:
1 3 5 7 9 11

(ix) Write the properties of the textbox.
(x) How do fields and records differ?
(xi) What is foreign key and where do we use it?
(xii) What is the main purpose of the report?
(xiii) How does an AND Condition differ from an OR condition?
(xiv) Write at least five advantages of DBMS.
(xv) Write a function subprogram to convert the temperature provided in °F to °C.
(xvi) Define primary key. Why is it necessary in any database?
(xvii)What is control structure? What statements are used in selection control?
(xviii) Convert the following mathematical expressions to Visual Basic equivalent statement:

(a) $x=(a^2-b^2)$
        $(a-b)^2$

(b) $y=4r^3$
        3

(c) $z=\sqrt{b}-c^2$
. $2b$

SECTION"C"DETAILED ANSWER QUESTIONS(24)

NOTE: Answer any 2 questions from this section.

3(a) Write salient features of VB.
(b) Discuss timer control
(c) What do you understand by referential integrity?
4(a) What is Combo box? Name and describe three types of Combo box
(b) What are relational and logical operators in VB?
(c) How many database Models are there? Describe any two.
5(a) Explain the data types used in MS Access.
(b) What is an Array? Explain how an array is used to reduce program code.
(c) Discuss tools available in the Tool box.

COMPUTER SCIENCE 2016

Time:20 Minutes.   Max.Marks:15

OPTION I PROGRAMMING USING C

SECTION"A" MULTIPLE CHOICE QUESTIONS

1. Choose the correct answer for each from the given options:

(i) Names given to variable, constants and functions are called:
- Header files
- **Identifiers**
- Loops
- Structures

(ii) For ( ) loop is used when we need to perform:
- Sequential logic
- Selection logic
- **Iteration logic**
- Parallel logic

(iii) This is a statement Terminator in C:
- {
- ;
- "
- }

(iv) This type of error is detected by the compiler:
- Run time
- Logical
- **Syntax**
- Absolute

(v) Pictorial/graphical representation of program logic is known as:
- **Flowchart**
- Procedure
- Source code
- Algorithm

(vi) A program, written in high level language is known as:
- **Source code**

- Object code
- Uni code
- Executable code

(vii) Format specifiers must start with:
- **%**
- &
- /
- \

(viii) This is a relational expression:
- x=y
- **x==y**
- x+y
- x++

(ix) The gets () statement is used to input:
- Single character data
- Integer data
- **String data**
- Float data

(x) To print the values of %lf a and b given below, the following print() statement will be used:
float a=3.14; double b=2.532:
- printf("%f%lf",a,b)
- printf("%Lf%Lf"|,a,b)
- printf("%Lf%f",a,b)
- printf("f%Lf",a,b)

(xi) The columns in a Microsoft Access table are called:
- Rows
- Records
- **Fields**
- Entities

(xii) A foreign key:
- has nothing to do with the primary key
- has different values than the primary key
- is found in tables that do not have a primary key
- **is related to the primary key of a different table**

(xiii) The various components in MS Access are called:
- Tools
- Entities

- Properties
- **Objects**

(xiv) A field in DBMS is sometimes called a/an:
- File
- **Attribute**
- Record
- Database

(xv) A function which invokes itself is called:
- **Recursive function**
- System function
- Library function
- Iteration function

COMPUTER SCIENCE 2016

Time: 2Hours 40 Minutes.   Marks:60

OPTION I PROGRAMMING USING C

SECTION"B"SHORT ANSWER QUESTIONS(36)

NOTE: Answer 6 questions from this section.

2(i) Define each format specifier with example:
(a) %c. (b) %d. (c) %f.   (d) %s
(e) %lf. (d) %ld

(ii) Determine any six valid or invalid identifiers in case of invalid, give reason:
(a) Include (b) S twenty (c) 5-numbers (d) y/s
(e) integer (f) f_name.   (g) Getch.   (h) smallest

(iii) Draw a flowchart that prints the table of any inputted number.
(iv) What is meant by case sensitive language? Write the structure of the C program.
(v) write a program in C language to print the numbers from 4 to 9 and their squares. (using do while loop)
(vi) Convert the following mathematical expressions into C equivalent statements.

(a) $A=\pi r^2$.   (b) $x=3ab^3 + 3a^2 b$.   (c) $d=|b^2 - 4ac|$

(d) y=a^2 + b^3 + c^4.   (e) X=(a^2 + b^3)^n

(f) J=½ pb

(vii) Write the output of the following statement of C-program
for(int I=2; i<10; i++)
{
printf("%d",i);
if(i%2==0
continue;
printf("\n");
}

(viii) What is an algorithm? Define different Algorithm Notations.
(ix) What are the responsibilities of DBA?

SECTION"C"DETAILED ANSWER QUESTIONS

NOTE: Answer 2 questions from this section(24)

3(a) What is a loop? Explain nested for loop with an example.
(b) What is the preprocessor directive? Explain any two preprocessor directives in C with examples.
4(a) Define data files. Describe any two types of data files used in C-program.
(b) Define operators explain different types of operators in C language.
5(a) Explain the objects of MS Access
(b) What is a database? what are the advantages of relational database management system(RDBMS)

COMPUTER SCIENCE 2016

Time:20 Minutes.   Max.Marks:15

OPTION II PROGRAMMING USING VISUAL BASIC

SECTION"A"MULTIPLE CHOICE QUESTIONS

1. Choose the correct answer for each from the given options:

(i) The cancel button property belongs to this object:
- Button
- **Form**
- Label
- Textbox

(ii) condition in "If…. Then statement" tests true:
- the next Else statement is activated
- the next If statement is activated
- **the next Then statement is activated**
- the End If statement is activated

(iii) DBMS stand for:
- **Database Management system**
- De base management system
- Dot base management system
- De bug Management system

(iv) this selection process is an example of multiple branches from a single expression:
- If….Then
- **Select Case**
- Do….Loop
- For….Next

(v) In the for….Next statement the default value for the step is:
- -1
- 0
- **1**
- 2

(vi) The number of radio buttons in a group policy that can be selected at the same time is:
- 0
- **1**
- 2
- 3

(vii) The scope of a variable refers to:
- the length of the variable
- the name of the variable
- **the accessibility of the variable**
- the data type of the variable

(viii) the statement, Dim days(7) as String, this part of the array number 7 refers to:
- Array name
- Data type
- Lower bound
- **Upper bound**

(ix) A foreign key:
- has nothing to do with the primary key
- has different values than the primary key
- is found in tables that do not have a primary key
- **is related to the primary key of a different table**

(x) The columns in a Microsoft Access table are called:
- Rows
- Records
- **Fields**
- Entities

(xi) A label is used to:
- Enter text
- **Display text**
- Edit text
- Selection option

(xii) A sub program which returns a value is called:
- Procedure
- Module
- **Function**
- Routine

(xiii) this data type is used to store long text entries in MS Access:
- **Memo**
- Text
- Number
- OLE object

(xiv) This control display text the user can edit:
- Check box

- List box
- Label
- **Text box**

(xv) The project file of Visual Basic has one of the following extension:
- .frm
- **.vbp**
- .ocx
- .rpt

COMPUTER SCIENCE 2016

Time: 2 Hours 40 Minutes.   Marks:60

OPTION II PROGRAMMING USING VISUAL BASIC

SECTION"B" SHORT ANSWER QUESTIONS(36)
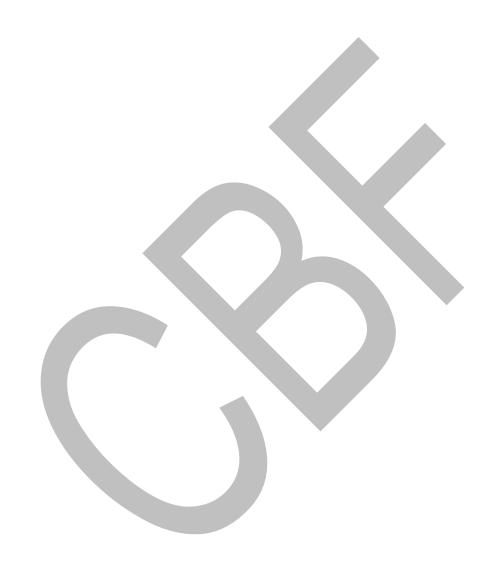
NOTE: Answer 6 questions from this section.

2(i) Describe any four features of Visual Basic.
(ii) Define array with Syntax and example.
(iii) What is combobox? List its properties.
(iv) List some file controls.
(v) Write a program in VB to generate the factorial of an inputted number.
(vi) What is Select Case? Write its syntax
(vii) Define form and state its tools used in VB.
(viii) What are the characteristics of a primary key?
(ix) Write a program that reads any character from the keyboard and determine whether the entered value is numerical or alphabet.

SECTION"C"DETAILED ANSWER QUESTIONS(24)

NOTE: Answer any 2 questions from this section.

3(a) What is an operator? Explain all operators in VB
(b) Explain all data types used in VB
4(a) What is common dialog control? Explain all methods and properties with examples.

(b) Explain all the objects of MS Access

5(a) Define loop. How many types of loops are used in VB?

(b) What are the advantages of RDBMS?

COMPUTER SCIENCE 2015

Time:20 Minutes.   Max.Marks:15

OPTION I PROGRAMMING USING C

SECTION"A" MULTIPLE CHOICE QUESTIONS

1. Choose the correct answer for each from the given options:

(i) The statement with any C function must be enclosed within a pair of:
- **{ }**
- [ ]
- ( )
- " "

(ii) The collection of related fields is called:
- **Record**
- Field
- Database
- Attribute

(iii) The default case in the switch statement is:
- **Optional**
- Compulsory
- Occasional
- Relational

(iv) The for loop counter variable should be off this type:
- Float
- **int**
- Char
- Double

(v) A field is sometimes called an/a:
- File
- **Attribute**
- Record
- Database

(vi) An object whose value can be changed during the program execution is called:
- Symbol

- **Variable**
- Constant
- Operator

(vii) To control the spacing and number of characters is displayed by:
- Precision specifier
- **Field-width specifier**
- Format specifier
- Escape sequence

(viii) This database object is used to present data in a printed format:
- Table
- Query
- Form
- **Report**

(ix) The memory space required for a float is:
- 2 bytes
- 8 bytes
- 1 byte
- **4 bytes**

(x) A function which invokes itself is called:
- **Recursive function**
- System function
- Library function
- Iterative function

(xi) In database records are also called:
- Attributes
- Entitles
- **Tuples**
- Relations

(xii) This is the symbol of AND operator:
- ||
- **&&**
- &
- |

(xiii) the control structure use do-whole loop is:
- Sequence
- Selection
- **Iteration**

- Random

(xiv) The symbol in a flowchart represents a process:
- **Rectangle**
- Oval
- Circle
- Diamond

(xv) The comment begins with the characters set of:
- */
- **/***
- *
- *\

COMPUTER SCIENCE 2015

Time:2Hours 40 Minutes.   Marks.60

OPTION I PROGRAMMING USING C

SECTION"B"SHORT ANSWER QUESTIONS(36)

NOTE: Answer 6 questions from this section.

2(i) what is the purpose of the statement # include <stdio.h> in a C program? What is a statement terminator?

(ii) Define logical operators in C language.

(iii) Differentiate between while loop and the do-whole loop.

(iv) What are escape sequences? Give an example.

(v) List some of the advantages of database management system.

(vi) Write the full form of the following acronyms:
DML, DDL, SQL, IDE, RDBMS, DBA

(vii) What is the key field why is it important in DBMS?

(viii) Write a program that reads the radius of a circle and displays the circle/s area. Use this formula Area= PI x radius x radius where PI is the constant whose value is 3.14159.

(ix) Rewrite the following mathematical expressions using C function:

(a) $\sqrt{x}+y \times z^3$
(b) $\sqrt{(a-b)^3}$
(c) $|ab-U$
          V

SECTION"C" DETAILED ANSWER QUESTIONS

NOTE: Answer 2 questions from this section.(24)

3(a) Explain the use of nested if-else statements.

(b)   Write a program that reads three numbers and prints the largest.

4(a) Explain the data types used in MS Access.

(b) Write a program in C to call a function which returns the cube of a given number.

5(a) Explain various types of database model.

(b) What are the commonly used input output functions in C? How are they accessed?

COMPUTER SCIENCE 2015

Time:20 Minutes.   Max.Marks:15

OPTION II PROGRAMMING USING VISUAL BASIC

SECTION"A" MULTIPLE CHOICE QUESTIONS

1. **Choose the correct answer for each from the given options:**

(i) The collection of related files is called:
   - Record
   - Field
   - **Database**
   - ADO

(ii) the collection of homogeneous data items is kept in:
   - Function
   - Structure
   - Procedure
   - **Array**

(iii) Option buttons are also called:
   - **Radio buttons**
   - Selected buttons
   - Labels

- Push buttons

(iv) in MS Access a calculation expression is built in:
- Join
- **Expression builder**
- Relation
- Union

(v) This method is used to hide the form:
- Hide.hide
- **Form.hide**
- Hide.form
- Formname.hide

(vi) The method used to remove items for the listbox is called:
- Display
- Clear
- Delete items
- **Remove items**

(vii) When the variable scope is limited to a procedure it is called:
- Host variable
- Global variable
- **Local variable**
- Public variable

(viii) In VB, 'Form' is saved with this extension:
- **.frm**
- .vbf
- .vbp
- .doc

(ix) This is used to create a calculated field in a query:
- a formula
- a filter
- a condition
- an expression

(x) in MS Access this object create views, alters and analyses the data in different ways:
- Form
- **Query**
- Report
- Macro

(xi) This data type can accommodate all types of data:
- Object
- Date
- **Variant**
- Fixed length string

(xii) In VB, an integer data type can accommodate number form:
- 0 to 65535
- 3.4e^-38 to 3.4e^38
- **-32.768 to +32.767**
- -128 to 127

(xiii) This control accept textual information from the user:
- Label
- **Text box**
- Caption
- Combo box

(xiv) This type of variable is used in all procedures:
- Private
- **Public**
- Confidential
- Relational

(xv) Default property of first form is:
- **Form1**
- Form
- Any
- Formo

COMPUTER SCIENCE 2015

Time: 2 Hours 40 Minutes.   Marks:60

OPTION II PROGRAMMING USING VISUAL BASIC

SECTION"B" SHORT ANSWER QUESTIONS(36)

NOTE: Answer 6 questions from this section.

2(i) Define any two of the following:

(a) Event Driven Programming

(b) Keyboard Events

(c) VB Projects

(ii) Explain ActiveX controls.

(iii) Differentiate between procedure and function.

(iv) Write a program that generates a multiplication table of an inputted number.

(v) What are the main objects of MS Access?

(vi) What is an Array? Explain with an example.

(vii) Create a single form to add to numbers using Text boxes and buttons.

(viii) What is a data dictionary? What does it provide in DBMS?

(ix) Write the full form of the following acronyms:

DML, DDL, SQL, IDE, RDBMS, DBA

SECTION"C"DETAILED ANSWER QUESTIONS(24)

3(a) Define various types of database models.

(b) Why is a primary key necessary in a database program?

4(a) State all the loop control structures supported by Visual Basic and compare them by their Syntax and an example.

(b)Discuss various data types used in MS Access.

5(a) Why is a database management system important to any organisation?

(b) What characteristics should a good DBMS exhibit?

COMPUTER SCIENCE 2014

Time:20 Minutes.   Max.Marks:15

OPTION I PROGRAMMING USING C

SECTION"A" MULTIPLE CHOICE QUESTIONS

1. Choose the correct answer for each from the given options:

(i) This format specifier is used for float data:
- %c
- %d
- %f
- %x

(ii) The range of integer value is:
- -32768 to +32767
- -30676 to +30678
- -34877 to +34878
- -36677 to +36678

(iii) This loop uses post testing:
- for()
- while()
- do-while()
- None of these

(iv) Every C program must have this function:
- Recursive
- Input/Output
- Main
- printf

(v) Library routine are attached to object program through:
- Compiler
- Linker
- Assembler
- Interpreter

(vi) Saving the function's definition under 'h' extension creates:
- Link file

- Object file
- Source file
- Header file

(vii) Unconditional looping is implemented through:
- for
- while
- do-while
- none of these

(viii) DML queries are also called:
- sub queries
- joins
- action queries
- unions

(ix) If a= -15, the statement a+ =5 yields:
- 15
- -10
- -15
- -5

(x) In %5d, 5 is:
- Integer
- hex value
- field's width specifier
- none of these

(xi) 'One-to-many' refers to:
- Cardinality
- Constraint
- Join
- Union

(xii) This is an arithmetic operator:
- &
- %
- &&
- <=

(xiii) The data type OLE is used for:
- Numeric data
- Text
- Object linking And Embedding

- None of these

(xiv) This is a postfix increment operator:
- ++a
- a+
- a++
- +a

(xv) The extension of a C program is
- .cpp
- .tc
- .cp
- .cc

COMPUTER SCIENCE 2014

Time:2Hours 40 Minutes.   Marks:60

OPTION I PROGRAMMING USING C

SECTION"B" SHORT ANSWER QUESTIONS(36)

NOTE: Answer 6 questions from this section.

2(i) What is the basic structure of a C program?

(ii) List all iterative control structures in C explain any one of them with syntax

(iii) Write a program in C that swaps two numbers.

(iv) What is a user defined function? Write its syntax

(v) Write a function that returns the cube of any inputted number.

(vi) Define Format specifiers in C language

(vii) Convert the following mathematical expression into C language statement using library function:

(i) $z = [x^2 + y^2] [q + y]$

$\quad\quad x(p-q) \quad\quad e^2 + n^2$

(ii) $x = -b + \sqrt{b^2 - 4ac}$

$\quad\quad\quad 2a$

(iii) $N = a^3 + 3a^2 b + 3ab^2 + b^3$

(viii) Write a program in C language that prints the following:

1
22
333
4444
55555

(ix) What is a relationship? State the kinds of relationships used in MS Access.

SECTION"C" DETAILED ANSWER QUESTIONS

NOTE: Answer any 2 questions from this section.(24)

3(a) Write a program that uses switch statements..
(b) Explain function prototype with an example.
4(a) Explain all types of operators used in C.
(b) Explain the data types used in C language with examples. How much space is reserved for each data type in memory.
5(a) Write the advantages of databases.
(b) Explain the objects used in Ms Access.

COMPUTER SCIENCE 2014

Time:20Minutes.   Max.Marks:15

OPTION II PROGRAMMING USING VISUAL BASIC

SECTION"A" MULTIPLE CHOICE QUESTIONS

1. **Choose the correct answer for each from the given options:**

(i) The data about data is
   ● Data
   ● Data dictionary
   ● Table
   ● Views

(ii) IDE stands for
   ● Integrated Development Environment

- Integrated Design Environment
- Integral Development Environment
- None of these

(iii) OLE stands for:
- Object Linking and Enhancing
- Object Linking and Embedding
- Object Listing and Embedding
- Object Listing and Enhancing

(iv) This control accepts textual information from the user:
- Label
- Texbox
- Caption
- Canvas

(v) The collection of homogeneous data item is kept in:
- Function
- Procedures
- Structure
- Array

(vi) Multiple input choices are displayed through:
- Function
- Windows
- List box
- Labels

(vii) The reserve wors 'END SUB' is used to:
- start function
- end procedure
- end program
- none of these

(viii) SQL stands for:
- Simple Query Language
- Structured Query Language
- System Query Language
- None of these

(ix) One-to-one, One-to-many and Many-to-many are called:
- Constraints
- Cardinality
- String

- Key

(x) Attribute of an Entity is mapped as:
- Field
- Record
- Tuple
- None of these

(xi) Bound field is bound to have as associated:
- File
- Record
- Record set
- Data

(xii) ADO is a gateway to:
- Server
- OS
- Database
- None of these

(xiii) WHILE WEND is a/an:
- conditional loop
- unconditional loop
- Post-test loop
- None of these

(xiv) SQL view in Access is used for:
- Form designing
- Query designing
- Labels
- None of these

(xv) Constraints are dropped through:
- DDL
- DML
- DQL
- DCL

COMPUTER SCIENCE 2014

Time: 2Hours 40 Minutes.   Marks:60

OPTION II PROGRAMMING USING VISUAL BASIC

SECTION"B" SHORT ANSWER QUESTIONS(36)

NOTE: Answer 6 questions from this section.

2(i) List all control structures used in VB write Syntax of any one of them.
(ii) Write code to invoke a sub-form the current active form over click operation on a command button.
(iii) Give two text boxes and a command button labelled as "Copy". Write the code text2 item into text1 item under click on copy button
(iv) Differentiate between primary key and foreign key.
(v) Write subroutines for a simple calculator over a form.
(vi) Write a program in Visual Basic to display the following pattern.
.
..
…
….
…..

(vii) Define the following:
   (a) Text box
   (b) List box
   (c) Combo box
   (d) Form

(viii) Explain event driven programming.
(ix) Write a program using" for" loop to print odd numbers from 1 to 50.

SECTION"C"DETAILED ANSWER QUESTIONS

NOTE: Answer 2 questions from this section.

3(a) Explain selection control structures used in VB.
(b) Explain joins and subqueries in DBMS.
4(a) Explain functions or subroutines with examples.
(b) Explain database constraints.
5(a) Explain the different data types used in VB.
(b) Write a program which takes three integers and prints the largest value among them.

COMPUTER SCIENCE 2013

Time: 20 Minutes.   Max.Marks:15

OPTION I PROGRAMMING USING C

SECTION"A" MULTIPLE CHOICE QUESTIONS

1. **Choose the correct answer for each from the given options:**

(i) The full form of IDE is:
- Integrated Design Environment
- **Integrated Development Environment**
- Internal Design Environment
- Interconnected Development Environment

(ii) The step by step solution of any program is called:
- A flow chart
- A pseudo code
- **An algorithm**
- None of these

(iii) Which format specifier is used for double data type?
- %d
- %f
- %c
- **%lf**

(iv) Each escape sequence must start with:
- &(and sign)
- /(forward slash)
- \(back slash)
- %(percentage sign)

(v) All C-Language program must have a function called:
- printf()
- getche()
- **main()**
- scanf()

(vi) A program that is written in high level language and is converted to low level language is known as:

- op-code
- source code
- **object code**
- none of these

(vii) All three expression of for loop must be separated by:
- ,
- ;
- &
- None of these

(viii) Key field must contain:
- Filtered values
- Default values
- **Unique values**
- Duplicate values

(ix) User defined function must have:
- Address
- **Prototype**
- Arguments
- None of these

(x) Which of the following control structures uses DO-WHILE?
- Sequence Logic
- Selection Logic
- **Iteration Logic**
- None of these

(xi) Collection of related files is called:
- Files
- **Database**
- Record
- None of these

(xii) Which of the following is a primary object in MS Access?
- **Table**
- Form
- Query
- Report

(xiii) A function that calls itself is called:
- Repeating function
- **Recursive function**

- Iterative function
- None of these

(xiv) Which statement is used to exit the switch statement?
- **Break**
- If
- Continue
- None of these

(xv) Which of the following is an arithmetic operator?
- **%**
- &
- &&
- <

COMPUTER SCIENCE 2013

Time: 2Hours 40 Minutes.   Marks:60

OPTION I PROGRAMMING USING C

SECTION"B" SHORT ANSWER QUESTIONS

NOTE: Answer 6 questions from this section.

2.(i) Define source code and object code.
(ii) Define switch case statement with an example.
(iii) What are escape sequences? Mention all escape sequences.
(iv) What will be the output of the following C language program:
```
for(i=5; i>0 ; i-)
   for(j=1 ;j>=1 ; j++)
      printf("%d",i);
    printf("n");
```

(v) Write a C = language program of character I/O which reads a character from a text file name ABC.TXT.
(vi) What is an Algorithm? Write different Algorithm standard notations.
(vii) Convert the following mathematical expressions into equivalent C expressions:

(i) x= (2ab)^2
        3c

(ii) -b-√b^2-4ac
.   2a

(iii) (x+y)^n

(viii) Define various data types supported by MS Access.
(ix) Write program to generate prime numbers upto 11 (like 2 3 5 7 11)

SECTION"C" DETAILED ANSWER QUESTIONS

NOTE: Answer 2 questions from this section(24)

3(a) Explain different data types used in C language with examples of each.
(b) What is a loop? DefineDifferent loops used in C language.
4(a) What is a function? What are the major characteristics of any function?
(b) Define database model with diagram.
5(a) Name the control structure used in C language and discuss iterative control structure with Syntax and example.
(b) What are format specifiers and how do we use them in C language programs?

COMPUTER SCIENCE 2013

Time:20 Minutes.   Max.Marks:15

OPTION II PROGRAMMING USING VISUAL BASIC

SECTION"A"MULTIPLE CHOICE QUESTIONS

1. **Choose the correct answer for each from the given options:**

(i) The collection of related fields is called:
- **Record**
- Entity
- File

- Database

(ii) ADO stands for
- Access Data Object
- **Active-X Data Object**
- Access Display Object
- Actual Data Organization

(iii) The collection of homogeneous data items called:
- Procedure
- Function
- Structure
- Array

(iv) The abs () function returns as:
- **Positive value**
- +& - both
- Negative value
- None of these

(v) In MS Access which objects are used to represent data in a printed format?
- Query
- Form
- **Report**
- Macro

(vi) When the variable scope is limited to a procedure it is called:
- Global variable
- **Local Variable**
- Host variable
- all of these

(vii) RDBMS stands for:
- Relational data managing system
- Relational data managing structure
- Relational data management structure
- **Relational database management system**

(viii) Option buttons are also called:
- **Radio buttons**
- Labels
- Selected buttons
- None of these

(ix) Which control accepts textual information from the user?
- Label
- **Textbook**
- Caption
- None of these

(x) The default name property of first Form is:
- Form
- **Form1**
- Form0
- None of these

(xi) A statement which executes one block of statement if the condition is true and another block of statement if the condition is false is:
- if
- if….then
- **if….then….else**
- None of these

(xii) This is similar to subroutine but always returns a single value:
- Subroutine
- Procedure
- **Functio**
- None of these

(xiii) One to many relation in RDBMS is:
- parent table has many records and child table also has many records
- **parent table has one record and child table has many records**
- parent has many records and child table has one record
- all of these

(xiv) Key field must contain:
- Filtered values
- Default values
- **Unique values**
- Duplicate values

(xv) To locate a record in a database table quickly, use the:
- **Database**
- Replace feature
- Find feature
- Print preview feature

COMPUTER SCIENCE 2013

Time:2Hours 40 Minutes.   Marks:60

OPTION II PROGRAMMING USING VISUAL BASIC

SECTION"B"SHORT ANSWER QUESTIONS(36)

NOTE: Answer 6 questions from this section.

2.(i) What is event driven programming?
(ii) Differentiate between input box and message box.
(iii) Define common methods of Form.
(iv) Define the terms (a) Primary key (b) Secondary key
(v) What is an object in MS Access? Enlist various objects of MS Access.
(vi) Write a program in Visual Basic to generate the following output:
12345
1234
123
12
1

(vii) Differentiate between DBMS and RDBMS.
(viii) Define the term Function. Explain how it is different from subroutine.
(ix) Explain Active-X control in VB.

SECTION"C" DETAILED ANSWER QUESTIONS(24)

NOTE: Answer any 2 questions from this section.

3(a) What is MDI? What are its advantages?
(b) Define the term database model. Explain relational and hierarchical models.
4(a) Define and discuss the loops used in Visual Basic.
(b) What is data type>? Define visual basic data types.
5(a) Write a program which accepts three values and check which one is Greater.
(b) What is a Control Structure? What statement is used for Selection Control?

COMPUTER SCIENCE 2012

Time: 20 Minutes.   Max.Marks 15

OPTION I PROGRAMMING USING C

SECTION"A" MULTIPLE CHOICE QUESTIONS

1. Choose the correct answer for each from the given options:

(i) Every C program must have this functions:
- scanf()
- main()
- printf()
- None of these

(ii) == is a/an
- Assignment operator
- Logical Operator
- Relational Operator
- Conditional Operator

(iii) C language is developed by
- Denis Richard
- Eric Richard
- Charles Babbage
- Blaise Pascal

(iv) An operator used to compare the values between the two operands is:
- Logical
- Relational
- Arithmetic
- Conditional

(v) A function used to get only a character from the keyboard is:
- getche()
- printf()
- scanf()
- gets()

(vi) This object in MS Access is used to present data in printed form:
- Table

- Query
- Report
- Form

(vii) The number of bytes occupied in memory by int type data is:
- 4
- 2
- 1
- 8

(viii) A format specifier used for int variable is:
- %c
- %s
- %f
- %d

(ix) This statement can terminate the loop immediately:
- Break
- Switch
- Continue
- Stop

(x) This Lopez appropriate when its body is executed at least once:
- For
- While
- Do-while
- None of these

(xi) This is not a relational operator:
- =
- ===
- <
- >=

(xii) Multiple initialisation in" for loop" are separated with:
- .
- :
- ;
- None of these

(xiii) In flowchart, a diamond box is used for:
- Decision
- Processing
- Flow

- Input/Output

(xiv) Functions prototype is also called:
- Function Definition
- Function Declaration
- Function Calling
- None of these

(xv) The sub-directory contains header files:
- lib
- include
- bin
- bgi

COMPUTER SCIENCE 2012

Time: 2 Hours 40 Minutes.   Marks. 60

OPTION I PROGRAMMING USING C

SECTION"B" SHORT ANSWER QUESTIONS

NOTE: Answer 6 questions from this section.(36)

2.(i) What are the different types used in C language?

(ii) What are the escape sequences? Define any five.

(iii) What are the steps involved in creating a report in MS Access?

(iv) What do DBMS and RDBMS stand for? State the advantages of DBMS.

(v) Write a program to input three numbers and print the greatest one.

(vi) What is an algorithm? What is its importance in computer programming?

(vii) Write a program that prints the squares of all the numbers from 1 to 20.

(viii) Convert the following mathematical expressions into equivalent C expressions.

(a) x=[√a^2 +√b^2]^2

(b) y= 2ab

    (a+b)(a-b)

(c) Z= a^m+b^n

    (m+n)^a

(ix) Write the output of the following statements of the C program.
 for (int i= 2; i<10 ; i++)
 { printf"%d" ,i);

```
if(i%2==0)
        continues;
printsf("/n");
 }
```

SECTION"C" DETAILED ANSWER QUESTIONS

NOTE: Answer 2 questions from this section.(24)

3(a) What is a flow chart? Describe different symbols used while drawing a flowchart.

(b) How many relationships exist in MS Access? Explain in detail.

4(a) What are the different operators used in C language?

Write their precedence also.

(b) What are the main objects in MS Access?

5(a) What is control structure? Discuss any two control structures with examples.

(b) Define the term function. Discuss any five I/O functions used in C language.

COMPUTER SCIENCE 2012

Time: 20 Minutes.   Max.Marks:15

OPTION II PROGRAMMING USING VISUAL BASIC

SECTION"A" MULTIPLE CHOICE QUESTIONS.

1. **Choose the correct answer for each from the given options:**

(i) This type of variable is used in all procedures:
- Private
- Public
- Dim
- None of these

(ii) In MS Access, this object creates views and analyzes the data in different ways.
- Query
- Form
- Report
- Macro

(iii) This statement allows the user to exist permanently from a loop:
- Quit
- End
- Exit
- Out

(iv) In VB,'Form' is saved with this extension:
- .frm
- .vbf
- .vbp
- .doc

(v) VB is derived from:
- C
- ASP
- BASIC
- None of these

(vi) RDBMS stands for:
- Relational Database Management System
- Relational Data Managing System
- Relational Data Managing Structure
- Relational Data Management Structure

(vii) SQL stands for:
- Structured Query language
- Sequential Query language
- Serial Query language
- None of these

(viii) In VB, integer data type can accommodate numbers ranging from
- 0 to 65536
- -32768 to 32767
- 0 to 127
- -654321 to 654320

(ix) A primary key must contain:
- Repetitive data
- Unique data
- Filtered data
- None of these

(x) This super suitable when number of iteration are already known:

- For….Next
- While….Wend
- Do….While
- Do….Until

(xi) MDI stands for:
- Multiple Document Interface
- Multiple Database Interface
- Multiple Document Interchange
- Multiple Database Interchange

(xii) In MS Access this object represents data in printed format:
- Table
- Query
- Report
- Form

(xiii) Boolean data type stores values of this type:
- Date
- True/False
- Character
- Number

(xiv) The collection of related records is called:
- Database
- Table
- Records
- Attribute

(xv) The operator is used to get remainder value:
- <
- +
- Mod
- None of these

COMPUTER SCIENCE 2012

Time: 2Hours 40 Minutes.   Marks:60

PROGRAMMING USING VISUAL BASIC

SECTION"B" SHORT ANSWER QUESTIONS

NOTE: Answer 6 part questions from this section.(36)

2(i) What is event driven programming? Explain with an example.

(ii) Differentiate between listbox and combobox.

(iii) Write a program to calculate the sum and average of five inputted numbers.

(iv) Describe the Select…..Case control structure with an example.

(v) What are the advantages of a visual basic program?

(vi) What are the steps of creating a report in MS Access?

(vii) What is an Array? Explain with an example.

(viii) Differentiate between ADO and DAO.

(ix) Differentiate between public variable and private variable.

SECTION"C" DETAILED ANSWER QUESTIONS (24)

NOTE: Answer 2 questions from this section.

3(a) What is a structured programming language?

(b) Define Relational Database models with an appropriate example

4(a) What is a Subroutine? State its importance in VB.

(b) What is meant by user interface? Describe two methods for adding a control to the form Design Window.

5(a) Define different objects and their functions in MS Access?

(b) What is MDI? What are its advantages in VB?

COMPUTER SCIENCE 2011

Time. 20 Minutes.   Max.Marks 15

OPTION I PROGRAMMING USING C

SECTION"A" MULTIPLE CHOICE QUESTIONS

1. Choose the correct answer for each from the given options:

(i) The declaration of scanf() & printf() is included in this header file:
- \<conio.h>
- \<stdio.h>
- \<math.h>
- None of these.

(ii) This is not a relational operator:
- &&
- >=
- ==
- <

(iii) This statement can terminate any loop immediately:
- Continue
- Switch
- Break
- None of these

(iv) This is a valid integer (int) type data
- 32768
- 10.5
- 2560
- All of these.

(v) = is an operator of the type:
- Assignment
- Arithmetic
- Relational
- Logical

(vi) This is not an arithmetic operator
- +
- /

- %
- x

(vii) This is called the collection of related fields
- Record
- Table
- Entity
- Attribute

(viii) This is a primary object in MS Access
- Form
- Report
- Table
- Query

(ix) II
. II is the type of operator:
- Logical
- Arithmetic
- Relational
- Address

(x) Every C statement must be terminated with:
- ,
- "
- ;
- "

(xi) This is a valid variable name:
- $amount
- 23balance
- marks_obt
- printf()

(xii) The float type data occupies:
- 8 bytes
- 1 byte
- 2 bytes
- 4 bytes

(xiii) This is invalid variable declaration
- double p
- unsigned int I
- float p,q;

- string name;

(xiv) What will be the output of the following statement?
   printf ("%.2f",633.5584);
   - 63.33
   - 63
   - 633.55
   - None of these

(xv) This is correctly initialized statement:
   - float y=23
   - integer y=23
   - Char y='yes'
   - int y=23

COMPUTER SCIENCE 2011

Time: 2Hours 40 Minutes.   Marks60

<u>OPTION I PROGRAMMING USING C</u>

<u>SECTION"B" SHORT ANSWER QUESTIONS</u>

NOTE: Answer 6 questions from this section. (36)

2.(i) Define relational operators with suitable examples.
(ii) Convert the following mathematical expression into C language:
   (a) $x=\dfrac{(2ab)^2}{3c}$

   (b) $y=\dfrac{4\pi r^3}{3}$

   (c) $z=\dfrac{(a^2 - b^2)^2}{(a-b)}$

(iii) Define any three IO functions with suitable examples
(iv) Write a program to generate the following output.
   .
   ..
   …
   ….

…..

(v) Define IDE and discuss how it is useful in C programming.
(vi) What is the function? What are the advantages of using functions?
(vii) What is the output of the following program statement?

```
for (a=1; a<=10; a++)
    printf("%d" , Pow (a,2);
```

(viii) Elaborate the term primary key with its characteristics.
(ix) Describe advantages of database management system.

SECTION"C" DETAILED ANSWER QUESTIONS

NOTE: Answer 2 questions from this section. (24)

3(a) Explain data types used in C language with suitable examples
(b) What are the main objects of MS Access?
4(a) What repetitive control structures are used in C? Discuss for loop with example.
(b) Define any three of the following:
(i) Escape sequence
(ii) Logical operators
(iii) Query
(iv) Header Files

5(a) write a program that prints all the ASCII characters from 0 to 255.
(b) Elucidate the term database model, explain relational and database model.

COMPUTER SCIENCE 2011

Time: 20 Minutes.   Max.Marks 15

OPTION II PROGRAMMING USING VISUAL BASIC

SECTION"A" MULTIPLE CHOICE QUESTIONS

1. Choose the correct answer for each from the given options:

(i) This control presents a group of buttons from which user can choose only one:
- Command button
- Check box
- Option button
- Combo box

(ii) This range is valid for storing integer data type:
- -13245 to 123450
- -65537 to 65538
- O to 4220
- -32768 to 32767

(iii) This control represents an action that is carried out where user clicks the button:
- Check box
- List box
- Combo box
- Command button

(iv) This is used to declare variable explicitly:
- Var
- Set
- Dim
- None of these

(v) This data type can accommodate all types of data:
- Object
- Date
- Variant
- Fixed length string

(vi) When the variable's scope limited to a procedure it is called:
- Global variable
- Local variable
- Host variable
- All of these

(vii) A loop which uses a counter variable is known as:
- For…..Next
- For…..Each
- While...Wend
- Do….loop

(viii) The collection of related records is called:
- Field
- File
- Entity
- Attribute

(ix) Default property of first form is:
- Form1
- Form
- Any
- None of these

(x) A form file is saved with one of the following extension:
- .Frx
- .Frm
- .Ocx
- None of them

(xi) This type of variable is used in all procedures:
- Dim
- Private
- Public
- None of these

(xii) An array index value starts from:
- 0
- -1
- 1
- None of them

(xiii) A primary key must contain:
- Filtered data
- Default values
- Unique data
- None of these

(xiv) A software that manages the creation, storage, access, update, deletion and use of database is:

- DBMS
- Database
- System software
- None of them

(xv) This data type is used to store long text entries in MS Access:
- Memo
- Text
- Number
- OLE object

COMPUTER SCIENCE 2011

Time: 2Hours 40 Minutes.   Marks:60

OPTION II PROGRAMMING USING VISUAL BASIC

SECTION"B" SHORT ANSWER QUESTIONS

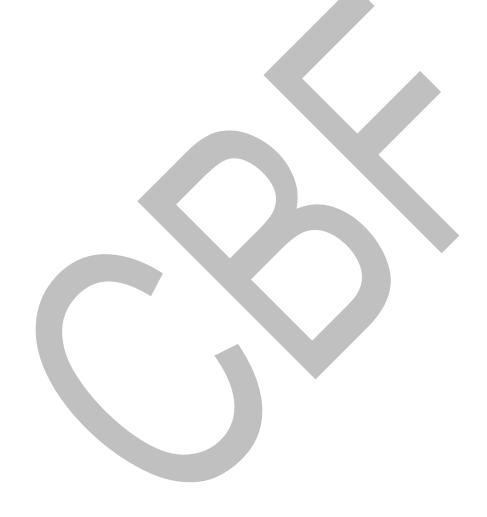**NOTE: Answer 6 part questions from this section (36)**

2.(i) Define the term function.Explain how it is different from subroutine?
(ii) Write a program to generate the following output:

    .
    ..
    …
    ….
    …..

(iii) Differentiate between the following:
(a) List box and Combo box.
(b) While…. Wend and For… Next

(iv) Describe common methods of form and its key properties.
(v) Differentiate between primary key and foreign key.
(vi) What is a multiple document interface? Define its characteristics.
(vii) Elaborate advantages of database management system.
(viii) DefineVarious data types used in MS Access.
(ix) How do we connect VB with the database

SECTION"C" DETAILED ANSWER QUESTIONS

NOTE: Answer two questions from this section. (24)

3(a) Define relationships in DBMS and RDBMS.
(b) Define the term database model.Explain relational and hierarchical model
4(a) Write a program that generate the following output
.   20 18 16 14 12 10 8 6 4 2 0
5(a) Elucidate the term ActiveX control. Discuss Scroll bar and Text box controls
(b) What are the main objects of MS-Access?

COMPUTER SCIENCE 2010

Time:20 Minutes.   Max.Marks:15

OPTION-I PROGRAMMING USING 'C'

SECTION"A" MULTIPLE CHOICE QUESTIONS

1. Choose the correct answer for each from the given options:

(i) Which of the following statements causes an exit from a loop or switch structure?
- Continue
- { }
- Break
- ( )

(ii) Which of the following operators operates on only one operand?
- >=
- = =
- &&
- !

(iii) Which one is a valid integer (int) type data?
- 39910
- 2,20000
- -32001
- +32768

(iv) Which loop is suitable when the body of the loop has to run at least once?
- for()
- While ()
- do()
- All of them

(v) Which of the following functions can print any type of data?
- putchar()
- scanf()
- printf()
- puts()

(vi) In C language a string of 30 characters is declared as:
- char 30
- char str [30]

- string
- string [30]

(vii) In a flowchart a rectangle is used for:
- Decision
- Processing
- Input
- Output

(viii) which of the following is the extension of a C program?
- CP
- CPP
- EXE
- BAK

(ix) Which object creates view, alters and analyse data in different ways?
- Query
- Form
- Report
- None of them

(x) In MS Access which object is used to represent data in a printed format?
- Query
- Form
- Report
- Macro

(xi) A relational operator is used to:
- combine values
- compare values
- delete values
- interchange values

(xii) Which of the following is a primary object in MS Access?
- Form
- Report
- Table
- Query

(xiii) Every C program must contain one of the following functions:
- printf()
- main()
- getch()
- clrscr()

(xiv) Which format specifier is used for displaying hexadecimal numbers?
- %u
- %x
- %0
- %f

(xv) Which of the following functions can input a string from the keyboard?
- getche()
- putch()
- gets()
- puts()

COMPUTER SCIENCE 2010

Time: 2 Hours 40 Minutes.   Marks. 60

OPTION-I PROGRAMMING USING C

SECTION"B" SHORT ANSWER QUESTIONS

NOTE: Answer 6 part questions from this section.

2. (i) Elaborate the basic structure of C program
(ii) Differentiate between any three of the following:
  (a) for and while
  (b) Primary key and foreign key
  (c) Break and continue
  (d) Switch and if-else

(iii) What is meant by Escape Sequence? Define different Escape Sequence with suitable examples.
(iv) Write a program using for loop that prints the factorial of an inputted number.
(v) Write a program that inputs your age and your sisters age and then display who is older of the two
(vi) Convert any two of the following mathematical expressions into equivalent C expressions:

  (a) $y=(a+b)^n$
  (b) $b=(x+z)^2-(a^2+b^3)$
  (c) $x= \frac{-b\sqrt{b^2-4ac}}{2a}$

(vii) What are library functions? Discuss any three library functions?

(viii) Write a program that generates the odd number from 101 to 150

(ix) What are the characteristics of a primary key?

SECTION"C" DETAILED ANSWER QUESTIONS

NOTE: Answer any two questions from this section. (24)

3(a) What are operators explain relational and logical operators with examples.

(b) Explain different types of files used in C language.

4(a) Name the control structures used in C language and discuss iterative control structure with syntax.

(b) What are the advantages of database management systems?

5(a) What is a user defined function? What three elements must be used with the user defined function?

(b) What data types are used in MS Access? discuss.

COMPUTER SCIENCE 2010

Time 20 Minutes.   Max. Marks 15

OPTION II PROGRAMMING USING VISUAL BASIC

SECTION"A" MULTIPLE CHOICE QUESTIONS

1. **Choose the correct answer for each from the given options:**

(i) Which control button contains the text edit field?
- Check box
- List box
- Combo box
- None of them

(ii) While designing a form
- Text box
- Label
- Command button
- Check box

(iii) Project window is known as:
- MDI window
- Immediate window
- Project explorer
- Property window

(iv) ADO stands for
- Access Data Object
- Access Data Organization
- Actual Data Object
- None of them

(v) Which one is a text property that appears on the title bar of a form?
- Caption
- Label
- Show task
- None of them

(vi) The collection of files is called:
- Record
- Field
- Database
- None of them

(vii) A list of all files and objects associated with the project as well as information about environment is called:
- Form
- Project file
- Event
- Object

(viii) the abs() function returns a:
- Positive value
- Negative value
- Positive and Negative values both
- None of them

(ix) What statement allows users to exit prematurely from a loop:
- Quit
- Out
- Exit
- None of them

(x) When VB finds an undeclared variable it creates a new variable of type:

- String
- Variant
- Date
- Boolean

(xi) in Access an object that creates view, alters and analyses data in different ways is:
- Query
- Form
- Report
- None of them

(xii) In MS Access a calculation expression is built in
- Join
- Expression builder
- Relation
- None of them

(xiii) A form file in VB is saved with one of the following extensions:
- .frm
- .frx
- .ocx
- None of them

(xiv) Which control displays text that can be edited by the user?
- Check box
- List box
- Combo box
- None of them

(xv) A block of statements that returns a value is called
- Procedure
- Function
- Loop
- All of them

COMPUTER SCIENCE 2010

Time: 2 Hours 40 Minutes.   Marks:60

OPTION II PROGRAMMING USING VISUAL BASIC

SECTION"B" SHORT ANSWER QUESTIONS

NOTE: Answer 6 part questions from this section (36).

2.(i) How many data types are used in VB? Discuss string data type with suitable examples.

(ii) Write a program that generates the given series 1, 3,5 7, 9, 11.

(iii) Elucidate the term operator.Explain logical and relational operators.

(iv) Differentiate between the following
    (a) Listbox and Combo box
    (b) Procedure and Function

(v) Define the term control structure. Describe repetitive control structure.

(vi) Define form and state its tools used in VB.

(vii) Write a program that generates a multiplication table of an inputted number.

(viii) Differentiate between DBMS and RDBMS.

(ix) Define relationship. Discuss its types used in MS Access.

SECTION"C" DETAILED ANSWER QUESTIONS

NOTE: Answer two questions from this section. (24)

3.(a) What is an array? Explain how an array is used to reduce program code.

(b) Define the following with examples

(i) if-then.   (ii) Select Case

4(a) Explain ActiveX controls in VB

(b) Explain the term data type and what data types are supported by MS Access?

5(a) Define database models

(b) Define a primary key and discuss its characteristics.