

**March – April 2016**

**Que: Give the advantage of flowchart.**

**Ans:** Advantages of drawing flowchart:

- Communication
- Effective analysis
- Proper documentation
- Efficient Coding
- Proper Debugging
- Efficient Program Maintenance

**Que: What is difference between compiler and interpreter?**

**Ans:**

<b>Compiler</b>	<b>Interpreter</b>
Compiler Takes <b>Entire</b> program as input	Compiler Takes <b>Single Statement</b> as input
Intermediate Object Code is Generated	No Intermediate Object Code is Generated
Conditional Control Statements are Executed <b>faster</b>	Conditional Control Statements are Executed <b>slower</b>
Program need not be <b>compiled</b> every time.	Every time higher level program is converted into lower level program
Errors <b>are displayed after</b> entire program is <b>checked</b>	Errors <b>are displayed for</b> every instruction <b>interpreted (if any)</b>
Example : <b>C Compiler</b>	Example : <b>BASIC</b>

**Que: What is keyword?**

**Ans:** Keywords are reserved words, we cannot use keyword as variable name, constant name, functions name or array name.

**Examples:**

int, float, char, switch, for, while, do, case, break, default etc....

**Que: Explain : Operator**

**Ans:** Operator are symbols that indicates the type of operation 'C' has to perform on data or value of variables.

**Types of operators:**

Arithmetic Operators : [ +, -, \*, /, % ]

Relational Operators : [ <, <=, >, >=, ==, != ]

Logical Operators : [ &&, ||, ! ]

Conditional or Ternary Operator : [ ? : ]

Increment or Decrement Operator : [ ++, -- ]

Assignment Operator : [ =, +=, -=, \*=, /=, %= ]

Bitwise Operator : [ &, |, <<, >> ]

Special Operator : [ sizeof(), \* ]

**Que: What is type casting?**

**Ans:** Type casting is a way to convert a variable from one data type to another data type.

There are two types of Type Casting

- (i) Implicit Type Casting
- (ii) Explicit Type Casting

**Que: Explain infinite loop.**

**Ans:** Infinite Loop means never ending loop.

An infinite loop (also known as an endless loop or unproductive loop) is a sequence of instructions in a computer program which loops endlessly.

Example:

```
#include<stdio.h>

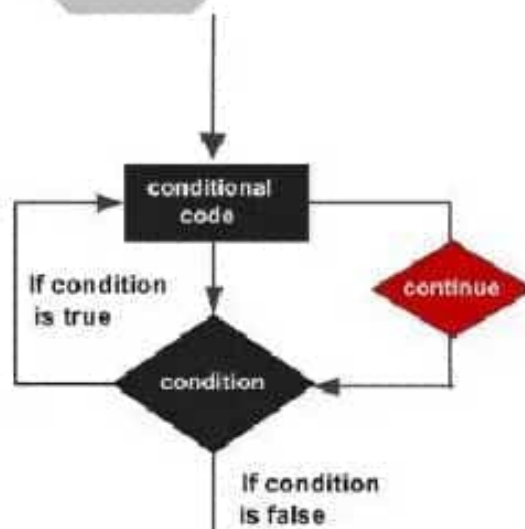
void main()
{
    int num=300;
    while(num>255); //Note it Carefully
        printf("Hello");
}
OR
#include<stdio.h>
void main()
{
    for ( ;; )
        printf("Hello");
}
```

**Que: Explain continue statement.**

**Ans:** The continue statement in C programming works somewhat like the break statement. Instead of forcing termination, it forces the next iteration of the loop to take place, skipping any code in between.

**Syntax:**

continue;



**Example:**

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**SHORT QUESTIONS**

**Que: How to create or write comments in C?**

**Ans:** Comments are non-executable statements in 'C'.

There are following ways to write comments in C

- 1 Single Line Comment ( Using // )
- 2 Multi Line Comment ( Using /\* ..... \*/ )

**Que: What is nested loop?**

**Ans:** C programming allows to use one loop inside another loop. The following section shows a few examples to illustrate the concept.

**Syntax:**

The syntax for a nested for loop statement in C is as follows:

```
for ( init; condition; increment )
{
    for ( initialization; condition; increment )
    {
        statement(s);
    }
    statement(s);
}
```

```
void main()
{
    int i,j;
    printf("\n enter any number----->");
    scanf("%d",&n);
    for(i=1;i<=5;i++)
    {
        for(j=1;j<=i;j++)
        {
            printf("%d",j);
        }
        printf("\n");
    }
    getch();
}
```

**Output:**

enter any number----->

5

1

12

123

1234

12345

**Que: What is the use of NULL in string?**

**Ans:** A null character is used to mark the end of a character string.

Strings are actually one-dimensional array of characters terminated by a **null** character '\0'. Thus a null-terminated string contains the characters that comprise the string followed by a **null**.

**Example:**

```
char greeting[6] = {'H', 'e', 'l', 'l', 'o', '\0'};
```

**Que: Explain putchar() in detail.**

**Ans:** putchar function displays a single character on the screen.

**Syntax:**

```
putchar(char );
```

**Example:**

```
void main()
{
    char c;
    clrscr();
    printf("Enter any Character--->");
    c=getchar();
    putchar(c);
}
```

**Output:**

```
Enter any character---->B
B
```

**Que: What is error?**

**Ans:** Any mistake in Program is known as error.

Error has three different types:

1. Syntax Error
2. Logical Error
3. Data Error

**Que: Explain #include.**

**Ans:** You request to use a header file in your program by including it with the C preprocessing directive **#include**, like you have seen inclusion of **stdio.h** header file, which comes along with your compiler.

The **#include** directive works by directing the C preprocessor to scan the specified file as input before continuing with the rest of the current source file.

**Example:**

```
#define HEADER_FILE
```

## October – November 2015

**Que: Why algorithm is required?**

**Ans:**

The step by step procedure for solving a problem is called algorithm."

"A sequence of precise and unambiguous instructions for solving a problem in finite number of operations."

**Que: What is Compiler?**

**Ans:** A computer program which reads source code and outputs assembly code or executable code is called compiler.

**OR**

A program that translates software written in source code into instructions that a computer can understand. Software used to translate the text that a programmer writes into a format the CPU can use.

**Que: What is variable? Give rules to create variable name.**

**Ans:** Variables are those whose values will be change during the program execution.

**Rules to create a variable:**

- First character must be alphabets or underscore (\_).
- Must contains alphabets, digits or Underscore (\_).
- 31 characters are significant.
- Must not contains white space.
- Must not use keywords.

**Que: Explain ? : Operator.**

**Ans:**

1. They are also called as Ternary Operator .
2. They also called as ?: operator
3. Ternary Operators takes on 3 Arguments

**Syntax:**

expression1 ? expression2 : expression3

where

- expression1 is **Condition**
- expression2 is Statement Followed if **Condition is True**
- expression2 is Statement Followed if **Condition is False**

**Example:**

```
#include<stdio.h>
```

```
void main()
```

```
{
```

```
    int num,flag;
```

```
    clrscr();
```

```
    printf("Enter the Number : ");
```

```
    scanf("%d",&num);
```

```
    flag = ((num%2==0)?1:0);
```

```
    if(flag==0)
```

```
        printf("\n odd");
```

```
    else
```



```
printf("\n even");
getch();
}
```

**OUTPUT:-**

**Enter the number: 20**

Even

**Que: What is type casting?**

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There are two types of Type Casting

- (i) Implicit Type Casting
- (ii) Explicit Type Casting

**Que: What is the difference between #define and const keyword?**








**Ans:** Comments are non-executable statements in 'C'.

There are following ways to write comments in C




- 1 Single Line Comment ( Using // )
- 2 Multi Line Comment ( Using /\* ..... \*/ )

**Que: Give the symbol of drawing flowchart.**

**Ans:**

Symbol	Use
	Start or End Symbol indicates the Starting or Ending point of the flowchart.
	The Input/output Symbol represents data that is available for input or resulting from processing (i.e. customer database records).
	The Document Symbol is used to represent any type of hard copy input or output (i.e. reports).
	The Process Symbol represents any process, function, or action and is the most frequently used symbol in flowcharting.
	The Decision Symbol is a junction where a decision must be made. A single entry may have any number of alternative solutions, but only one can be chosen.
	The Predefined Process symbol indicates a number of processing steps whose detail is of no concern at this point.
	The Preparation symbol indicates that any process step that is a Preparation process flow step, such as a set-up operation.

**SHORT QUESTIONS**

	The On page Connector Symbol represents reference to another point in the flowchart on a same page.
	The Off page Connector Symbols are used to indicate the flowchart continues on another page (Different Page).
	The Flow line connector shows the direction that the process flows.

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```
for ( init; condition; increment )
{
    for ( initialization; condition; increment )
    {
        statement(s);
    }
    statement(s);
}
```

**Example:**

```
void main()
{
    int i,n,j;
    clrscr();
    printf("\n enter any number----->");
    scanf("%d",&n);
    for(i=1;i<=5;i++)
    {
        for(j=1;j<=i;j++)
        {
```

```
        printf("%d",j);
    }
    printf("\n");
}
getch();
}
```

**Output:**

Enter any number-->

5  
1  
12  
123  
1234  
12345

**Que: What is multi dimensional array?**

**Ans:** C programming language allows programmer to create arrays of arrays known as multidimensional arrays.

Multi Dimensional array are very similar to standard arrays with the exception that they have multiple sets of square brackets after the array identifier. A two dimensional array can be work as a grid of rows and columns.

**Que: Explain getchar() in detail.**

**Ans:**

getchar() is used to take input of a single character.

**Syntax:**

Variable = getchar();

**Example:**

```
void main()
{
    char c;
    clrscr();
    printf("Enter any Character--->");
    c=getchar();
    putchar(c);
}
```

**Que: What is error?**

**Ans:** Any mistake in Program is known as error.

Error has three different types:

1. Syntax Error
2. Logical Error
3. Data Error

**Que: Explain void main().**

**Ans:** void main() is a main function in c language. void means nothing return any value. this function is used to execute our program. Without main(), program can compile but not run. To run any C program we must have to write main(),



**March – April 2015**

**Que: What is difference between variable and constant?**

**Ans:**

Constant	Variable
Constant are those whose values will not be changed during program execution.	Variable are those whose values will be changed during program execution.
To declare Constant <b>const</b> keyword is used.	If we will not mention <b>const</b> then by default it will be variable.
Syntax. const Data type variablename = value;	Syntax. Data type variablename = value;
Example: const float pi=3.14; //here pi is constant	Example: float pi=3.14; // here pi is variable we can change the value of pi

**Que: What is Type casting?**

**Ans:** Type casting is a way to convert a variable from one data type to another data type.

There are two types of Type Casting

- (i) Implicit Type Casting
- (ii) Explicit Type Casting

**Que: If a = 5, then determine the value of m and a for the following expression.**

**m=++a \* 5;**

**Ans:** The value of m will be 30 and  
The value of a will be 6.

**Que: State the output produce b the following printf statements:**

**printf("%d \t %4.2f",1234,456);**

**Ans:** It will give error.  
Abnormal program termination  
printf : floating point formats not linked

**Que: How can we use putchar() function to output multi character strings?**

**Ans:**

```
#include<stdio.h>
void main()
{
    int i = 0;
    char name[20];
    printf("\nEnter the Name : ");
    while((name[i] = getchar())!='\n')
        i++;
    for(i=0;i<strlen(name);i++)
        putchar(name[i]);
    getch();
}
```

**OUTPUT:-**

Enter the name: Vnsgu  
Vnsgu

SHORT QUESTIONS

**Que: Which of the following cannot be checked in switch case statement?**

- (i) Character
- (ii) Integer
- (iii) Float
- (iv) enum

**Ans:** The following cannot be checked in switch – case statement.  
(iii) Float

**Que: What is infinite loop? Give Example.**

**Ans:**

Infinite Loop means never ending loop.

An infinite loop (also known as an endless loop or unproductive loop) is a sequence of instructions in a computer program which loops endlessly.

Example:

```
#include<stdio.h>
void main()
{
int num=300;
while(num>255); //Note it Carefully
    printf("Hello");
}
OR
#include<stdio.h>
void main()
{
for (; ; )
    printf("Hello");
}
```

**Que: What is debugging?**

**Ans:** Debugging is the process of detecting and correcting the syntax errors in a program. This consists of two stages:

1. Systematic desk checking
2. Translator system checking

**Que: What do you mean by relational expression? Give Example.**

**Ans:**

Relational Expressions are combination of Relational Operator ( < , <= , > , >= , ++ , != ), Constant and variable.

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### SHORT QUESTIONS

Expressions written to compare two quantities using certain relational operators are known as *relational expressions*. These expressions take only one of the two values, namely, TRUE or FALSE.

**Example:**

```
void main()
```

```
{
```

```
    float a, b, c;
```

```
    printf("Enter three numbers: ");
```

```
    scanf("%f %f %f", &a, &b, &c);
```

```
    if(a>=b && a>=c)
```

```
        printf("Largest number = %.2f", a);
```

```
    if(b>=a && b>=c)
```

```
        printf("Largest number = %.2f", b);
```

```
    if(c>=a && c>=b)
```

```
        printf("Largest number = %.2f", c);
```

```
}
```

**OUTPUT:-**

Enter three numbers:

20

10

30

Largest number=30.00

## October – November 2014

**Que: What is the meaning of void main()? Is it necessary to write void main() in every C program? Why?**

**Ans:** void main() is a main function in c language. void means nothing return any value. this function is used to execute our program. Without main(), program can compile but not run. To run any C program we must have to write main().

**Que: What is symbolic constant?**

**Ans:** A symbolic constant is name that substitute for a sequence of character that cannot be changed. The character may represent a numeric constant, a character constant, or a string. A *symbolic constant* is a "variable" whose value does not change during the entire lifetime of the program.

**Example:**

```
#define PI 3.141593
#define TRUE 1
#define FALSE 0
```

**Que: If a = 5, then determine the value of m and a for the following expression.**  
**m=10 + ++a;**

**Ans:** The value of m will be 16 and  
The value of a will be 6.

**Que: State the output produce b the following printf statements:**  
**printf("%d %d, %f",10,'A',1.23);**

**Ans:** 10 65 1.230000

**Que: Explain Conditional operator.**

**Ans:**

1. They are also called as Ternary Operator .
2. They also called as ?: operator
3. Ternary Operators takes on 3 Arguments

**Syntax:**

expression1 ? expression2 : expression3

where

- expression1 is **Condition**
- expression2 is Statement Followed if **Condition is True**
- expression3 is Statement Followed if **Condition is False**

**Example:**

```
#include<stdio.h>
void main()
{
    int num,flag;
    clrscr();
    printf("Enter the Number : ");
    scanf("%d",&num);
    flag = ((num%2==0)?1:0);
    if(flag==0)
        printf("\n odd");
}
```

```
else
    printf("\n even");
getch();
}
```

**OUTPUT:-**

Enter the number: 15  
Odd

**Que: How can we use getchar() function to read multicharacter string?**

**Ans:** The following method is use to read multicharacter string.

**Example:**

```
#include<stdio.h>
void main()
{
    int i = 0;
    char name[20];
    printf("\nEnter the Name : ");
    while((name[i] = getchar())!='\n')
        i++;
    for(i=0;i<strlen(name);i++)
        putchar(name[i]);
    getch();
}
```

**Que: What are benefits of drawing flowchart?**

**Ans:** benefits of drawing flowchart:

- Communication
- Effective analysis
- Proper documentation
- Efficient Coding
- Proper Debugging
- Efficient Program Maintenance

**Que: What is Syntax error? Give an example.**

**Ans:** Syntax Errors in computer programs that typically involve incorrect punctuation, incorrect word sequence, undefined terms, or misuse of terms.

These errors are automatically detected, and pointed out by language processor.

For example:

```
int X(10)
pintf("Syntax Error");
clrser();
int x=y+/2;
```

**Que: What is do you mean by logical expression? Give Example.**

**Ans:** Expressions written to compare two quantities using certain relational operators are known as *logical expressions*. These expressions take only one of the two values, namely, TRUE or FALSE



**Example:**

```
void main()
{
    float a, b, c;
    printf("Enter three numbers: ");
    scanf("%f %f %f", &a, &b, &c);
    if(a>=b && a>=c)
        printf("Largest number = %.2f", a);
    if(b>=a && b>=c)
        printf("Largest number = %.2f", b);
    if(c>=a && c>=b)
        printf("Largest number = %.2f", c);
}
```

## March – April 2014

**Que: What is Computer Program?**

**Ans:** A **computer program**, or just a **program**, is a sequence of instructions, written to perform a specified task with a computer.

**Que: What is Interpreter?**

**Ans:** The interpreter translates one statement at a time and, if error-free, executes. This continues till the last statement. Thus an interpreter translates and executes the first instruction before it goes to the second, while a compiler translates the whole program before execution.

**Que: What are the advantages of drawing flowchart?**

**Ans:** Advantages of drawing flowchart:

- Communication
- Effective analysis
- Proper documentation
- Efficient Coding
- Proper Debugging
- Efficient Program Maintenance

**Que: What is Infinite loop? Give Example.**

**Ans:** Infinite Loop means never ending loop.

An infinite loop (also known as an endless loop or unproductive loop) is a sequence of instructions in a computer program which loops endlessly.

Example:

```
#include<stdio.h>
void main()
{
int num=300;
while(num>255); //Note it Carefully
    printf("Hello");
}
OR
#include<stdio.h>
void main()
{
for ( ;; )
    printf("Hello");
}
```

SHORT QUESTIONS

**Que: Why array is used?**

**Ans:** Array is used to store similar data. An array is a variable which can contain more than one value.

**Que: What is Syntax Error?**

**Ans:** Syntax Errors in computer programs that typically involve incorrect punctuation, incorrect word sequence, undefined terms, or misuse of terms.

These errors are automatically detected, and pointed out by language processor.

For example:

```
int X(10)
printf("Syntax Error");
clrser();
int x=y+/2;
```

## October – November 2013

**Que: What is Source Program?**

**Ans:** A program written in a language other than machine code, typically a high-level language is known as Source Program.

**Que: What do you mean by self replacement technique?**

**Ans:** Self replacement technique means assign new value to variable on the base of previous or old value.

Example:

$A = A + 2$

$I = I + 1$

$N = N - 1$

**Que: What is the goal of program testing?**

**Ans:** Testing is a process of identifying defects, where a defect is any difference between actual and expected result.

**Que: Define term Algorithm.**

**Ans:** "The step by step procedure for solving a problem is called algorithm".

**Que: What is the range of values of data type Long Integer?**

**Ans:** -2,147,483,648 to 2,147,483,647

**Que: List all the Relational and Logical Operators.**

**Ans:**

**Relational Operators**

Operator	Meaning
<	Less Than
< =	Less Than or Equal to
>	Greater Than
> =	Greater Than or Equal to
==	Equal to
!=	Not Equal to

**Logical Operators**

Operator	Meaning
&&	Logical AND
	Logical OR
!	Logical NOT

**Que: Give the use of switch...case.**

**Ans:** A switch statement allows a variable to be tested for equality against a list of values. Each value is called a case, and the variable being switched on is checked for each switch case.

**Que: What is Subscript? Can we give subscript negative?**

**Ans:** Subscript means the size or range of array, it means that the total value which we are going to store in array.

No, we cannot give subscript negative.

## March – April 2013

**Que: Give size and range of Integer data type.**

**Ans:** Size of integer is 2 Byte and range of integer is -32768 to 32767.

**Que: Which function is used for string concatenation?**

**Ans:** strcat() is used for string concatenation.

Example:

void main()

```
{  
    char c[]="FY",c1[]="BCA";  
    clrscr();  
    printf("%s",strcat(c,c1));  
    getch();  
}
```

Output:

FYBCA

**Que: Can we give subscript negative? Give reason.**

**Ans:** we cannot give subscript negative because in C Array index starts from 0.

**Que: What do you mean by Syntax error?**

**Ans:** Syntax Errors in computer programs that typically involve incorrect punctuation, incorrect word sequence, undefined terms, or misuse of terms.

These errors are automatically detected, and pointed out by language processor.

For example:

These errors are automatically detected, and pointed out by language processor.

For example:

```
int X(10)  
printf("Syntax Error");  
clrscr();  
int x=y+/2;
```

All have syntax errors. All such errors should be corrected before running the program.

**Que: What is Logical Expression?**

**Ans:** Expressions written to compare two quantities using certain relational operators are known as *logical expressions*. These expressions take only one of the two values, namely, TRUE or FALSE

**Que: What is the meaning of word "testing"?**

**Ans:** Testing is a process of identifying defects, where a defect is any difference between actual and expected result.

**Que: What is the function of GOTO?**

**Ans:** GOTO is used to jump from one place to another in program.

```
goto label;
```

..



label: statement;

Example:

```
void main()
```

```
{  
    int i=1;  
    clrscr();  
a:  
    if(i<=5)  
    {  
        printf("%d",i);  
        i++;  
        goto a;  
    }  
    getch();  
}
```

Output;  
12345

## September – October 2012

**Que: What is Computer Program?**

**Ans:** A sequence of instructions that a computer can interpret and execute;

**Que: What is the range of values for C variables that is declared of data type LONG?**

**Ans:** -2,147,483,648 to 2,147,483,647

**Que: What do you mean by self replacement technique?**

**Ans:** Self replacement technique means assign new value to variable on the base of previous or old value.

Example:

A = A + 2

I = I + 1

N = N - 1

**Que: Write 'C' Statement for**

$$\sqrt{(Y^2 + (3AB)) / 2}$$

**Ans:** `sqrt((Y * Y + ( 3 * A * B )) / 2 )`

**Que: Write different ways to writing comments in C program.**

**Ans:** Comments are non-executable statements in 'C'.

There are following ways to write comments in C

1 Single Line Comment ( Using // )

2 Multi Line Comment ( Using /\* ..... \*/ )

**Que: Can we change the value of control variable in FOR LOOP?**

**Ans:** No, We cannot change the value of Control variable in FOR LOOP.

**Que: Give difference between forward and backward jumping.**

**Ans:**

<b>Forward Jumping</b>	<b>Backward Jumping</b>
When C program skips one or more statements then it is known as Forward Jumping	When C program repeat one or more statements then it is known as Backward jumping
It will skip one or more statements.	It will repeat one or more statement.
<b>Syntax:</b> goto label; .. . label: statement;	<b>Syntax:</b> label: statement; .. . goto label;

**Que: Write the purpose of ABS().**

**Ans:** `abs( )` function will return the absolute value of a number.

Ex: `printf("%d",abs(-11));`       $\longrightarrow$       11

**Que: What is Syntax error? Give an Example.**

SHORT QUESTIONS

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printf("Syntax Error");
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All have syntax errors. All such errors should be corrected before running the program.

**March – April 2012**

**Que: Define Algorithm.**

**Ans:** "The step by step procedure for solving a problem is called algorithm."

**Que: What is Computer Program?**

**Ans:** A sequence of instructions that a computer can interpret and execute;

**Que: give an example of Logical Operator.**

**Ans:**

```
void main()
{
    float a, b, c;
    printf("Enter three numbers: ");
    scanf("%f %f %f", &a, &b, &c);
    if(a>=b && a>=c)
        printf("Largest number = %.2f", a);
    if(b>=a && b>=c)
        printf("Largest number = %.2f", b);
    if(c>=a && c>=b)
        printf("Largest number = %.2f", c);
}
```

**Que: What is a Debugging?**

**Ans:** Debugging is the process of detecting and correcting the syntax errors in a program. This consists of two stages:

3. Systematic desk checking
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    if(a>=b && a>=c)
        printf("Largest number = %.2f", a);
    if(b>=a && b>=c)
        printf("Largest number = %.2f", b);
    if(c>=a && c>=b)
        printf("Largest number = %.2f", c);
}
```

**Que: Write C Expression**

$$M = nr^2 + ps$$

**Ans:**  $((n * r) * (n * r)) + (p * s)$

**Que: What is Self replacement Technique?**

**Ans:** Self replacement technique means assign new value to variable on the base of previous or old value.

Example:

$A = A + 2$

$I = I + 1$

$N = N - 1$

**Que: Give major factors responsible for program efficiency.**

**Ans:** Major factors responsible for Program Efficiency are:

Computer Memory

Execution Time

**Que: Explain any 2 mathematical in built function.**

**Ans:**

**sqrt ( )**

This function is use to return the square root of the number,

Ex:         $\text{printf}(\text{"%f"}, \text{sqrt}(49));$          $\longrightarrow$         7.000000  
              $\text{printf}(\text{"%f"}, \text{sqrt}(25));$          $\longrightarrow$         5.000000

**abs( )** function will return the absolute value of a number.

Ex:     $\text{printf}(\text{"%d"}, \text{abs}(-11));$          $\longrightarrow$         11  
          $\text{printf}(\text{"%d"}, \text{abs}(11));$          $\longrightarrow$         11





## October – November 2011

**Que: Explain the use of connector symbol in a flowchart.**

**Ans:** Connector symbols are used to connect two parts of the flowchart.

There are two types of connector in flowchart:

1. On page connector	
2. Off page connector	

**Que: What is the range of values for C variables that is declared of data type LONG?**

**Ans:** -2,147,483,648 to 2,147,483,647

**Que: What do you mean by Relational Expression? Give example.**

**Ans:** Expressions written to compare two quantities using certain relational operators are known as *Relational expressions*. These expressions take only one of the two values, namely, TRUE or FALSE

**Que: Explain modulo operator of C.**

**Ans:** Modulo ( % ) operator is used to give modulus or remainder of given value.

Printf("%d", 7 % 2 );                      →                      1

**Que: Write the purpose of SQR() and ABS() functions.**

**Ans:**

**sqrt ( )**

This function is used to return the square root of the number.

Ex:                      printf("%f", sqrt(49));                      →                      7.000000  
                              printf("%f", sqrt(25));                      →                      5.000000

**abs( )** function will return the absolute value of a number.

Ex:   printf("%d", abs(-11));                      →                      11  
          printf("%d", abs(11));                      →                      11

**Que: Define Source Program.**

**Ans:** Entire user written program is known as Source Program.

**Que: What is subscript? Can we give subscript negative?**

**Ans:** Subscript means the size or range of array, it means that the total value which we are going to store in array.

No, we cannot give subscript negative.

**Que: can we store name and number in same array?**

**Ans:** No, We cannot store name and number in same array because array is collection of similar data type.

**Que: What is the goal of Program Testing?**

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**SHORT QUESTIONS**

**Ans:** Testing is a process of identifying defects, where a defect is any different between actual and expected result.

**March – April 2011**

All the short questions are same as September – October 2012

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**March – April 2014**

**Que: Why C is Middle level language?**

**Ans:** C is middle level language because it combines the elements of high level languages with the functionalism of assembly language.

**Que: Explain jumping statements.**

**Ans:** In C for jumping from one statement to another statement goto is used.

A goto statement in C programming language provides an unconditional jump from the goto to a labeled statement in the same function.

**Types of Jumping:**

Forward Jumping

Backward Jumping

**Que: What is Multidimensional array?**

**Ans:** C programming language allows programmer to create arrays of arrays known as multidimensional arrays.

Multi Dimensional array are very similar to standard arrays with the exception that they have multiple sets of square brackets after the array identifier. A two dimensional array can be work as a grid of rows and columns.

**Que: Explain sizeof() operator with example.**

**Ans:** The sizeof operator returns the size of its operand in bytes. The sizeof operator always precedes its operand.

**Eg:**

```
int i;
```

```
char c;
```

```
printf("Size of integer : %d",sizeof(i));
```

```
printf("Size of character : %c",sizeof(c));
```

**Output:**

Size of integer : 2

Size of character : 1

**Que: What is use of main()? Is it necessary to write main() in program? Justify.**

**Ans:** In every C Program must have main() function, It defines the starting point of the program.

The program execution must be start from the main().

**Que: Explain underflow and overflow of data**

**Ans:** Problem of data overflow occurs when the value of a variable is either too big or too small for the data type to hold. When the data is too big than the data type at that time data overflow occurs, and when the data is too small than the data type at that time data underflow occurs.

**Que: Explain scanf() with example.**

**Ans:** scanf() is used to reads formatted input.

Syntax:

```
scanf(" Format Specifier ", arg1, arg2.... argn);
```

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**SHORT QUESTIONS**

**Example:**

```
void main()
{
    int n;
    float f;
    char c[20];
    clrscr();
    scanf("%d %f %s",&n,&f,c);
    printf("%d \t %f \t %s",n,f,c);
    getch();
}
```

Output:

10 3.14 test

10        3.140000    test

## September – October 2013

**Que: What is the difference between pre and post increment operator?**

**Ans:**

<b>Pre Increment</b>	<b>Post Increment</b>
In the Pre Increment value is first incremented and then used inside the expression.	In the Post Increment first value is used and then value will be increments.
<b>Eg. ++i, ++j</b>	<b>Eg. i++, j++</b>
<pre>void main() {     int a=5;     printf("%d",++a);     printf("\n%d",++a); } Output: 6 7</pre>	<pre>void main() {     int a=5;     printf("%d",a++);     printf("\n%d",a++); } Output: 5 6</pre>

**Que: What are tokens?**

- Ans: C tokens are the basic buildings blocks in C language which are constructed together to write a C program.
- Each and every smallest individual unit in a C program is known as C tokens.
- C tokens are of six types. They are,
  1. Keywords (eg: int, while),
  2. Identifiers (eg: main, total),
  3. Constants (eg: 10, 20),
  4. Strings (eg: "total", "hello"),
  5. Special symbols (eg: {}, {}),
  6. Operators (eg: +, /, -, \*)

**Que: What do you mean by type casting?**

**Ans:** Type casting is a way to convert a variable from one data type to another data type. There are two types of Type Casting

- (i) Implicit Type Casting
- (ii) Explicit Type Casting

**Que: What is the use of goto statement?**

**Ans:** A goto statement in C programming language provides an unconditional jump from the goto to a labeled statement in the same function.

**Syntax:**

```
goto label;
..
.
label: statement;
```

**Que: What do you mean by modular programming?**

**Ans:** Modular programming is the process of subdividing a computer program into separate sub-programs.



SHORT QUESTIONS

"Modular Programming" is the act of designing and writing programs as interactions among functions that each perform a single well-defined function.

**Que: What is the use of default in switch case?**

**Ans:** If there is no match with a constant expression, the statement associated with the default keyword is executed. If the default keyword is not used, control passes to the statement following the switch block.

**Eg:**

```
switch( c )
{
    case 'A':
        capa++;
    case 'a':
        lettera++;
    default :
        total++;
}
```

**Que: How to include comments in C ?**

**Ans:** To include comments in C, following methods will be used:

- (1) Single Line Comments ( // )
- (2) Multi Line Comments ( /\*.....\*/ )

**March – April 2013**

**Que: Which of the following cannot be checked in switch – case statement?**

- (i) Character
- (ii) Integer
- (iii) Float
- (iv) enum

**Ans:**

The following cannot be checked in switch – case statement.

- (iii) Float
- (iv) enum

**Que: does n++ executes faster than n+1?**

**Ans:** Yes, n++ executes faster than n + 1; the expression n++ requires a single machine instruction to carry out the increment operation whereas, n+1 requires more instructions to carry out this operation.

**Que: What is the difference between local variable and global variable?**

**Ans:**

<b>Local Variable</b>	<b>Global Variable</b>
The variable which is defined inside any function is known as local variable.	The variable which is defined in global declaration section is known as global variable.
It accessible within particular function where it is defined.	It accessible in whole program.
Eg. void main() { int a=5; // Local Variable printf("%d",a++); printf("%d",a++); }	int a=5; // Global Variable void main() { printf("%d",a++); printf("%d",a++); }

**Que: what is the use of 'break'?**

**Ans:** break is used to perform following task.

- When the break statement is encountered inside a loop, the loop is immediately terminated and program control resumes at the next statement following the loop.
- It can be used to terminate a case in the switch statement.

**Que: What is jumping statement?**

**Ans:** Jumping statement is used to jump from one statement to another. To perform jumping C has goto keyword.

There are two types of jumping.

- (i) Forward Jumping
- (ii) Backward Jumping

**Que: What is the difference between prefix and postfix increment?**

**Ans:**

<b>Pre Increment</b>	<b>Post Increment</b>
In the Pre Increment value is first incremented and then used inside the expression.	In the Post Increment first value is used and then value will be increments.
<b>Eg. ++i, ++j</b>	<b>Eg. i++, j++</b>
<pre>void main() {     int a=5;     printf("%d",++a);     printf("\n%d",++a); }</pre> <p>Output: 6 7</p>	<pre>void main() {     int a=5;     printf("%d",a++);     printf("\n%d",a++); }</pre> <p>Output: 5 6</p>