



Computer Programming
Chapter Wise Question Bank

Unit I

A. Fundamental of Computers

1. Write a note on Flowchart and Algorithm. [Nov'14, May'09] **5 Marks**
2. Define algorithm and flowchart. Explain different symbols used in drawing the flowcharts. [Nov'13 old] **5 Marks**

Unit I

B. Structure of 'C' program

1. Write note on Structure of C. [Nov'14] **5 Marks**
 2. Write correct output with detailed explanation.
main()
{
 int c=1, d=5, e=10, a;
 a=c > 1 ? d > 1 || e > 1 ? 55 : 666 : 777;
 printf("a= %d", a);
}
- [Nov'13] **5 Marks**
3. What are different rules for defining a variable in 'C'? [May'13, 12, 11] **5 Marks**
 4. Explain the bitwise operators in C. [May'13] **5 Marks**
 5. Explain various types of operators in C in detail. [May'13, Nov'12] **5 Marks**
 6. Explain the use of Logical operators with example. [May'12] **5 Marks**
 7. Write a note on scope of a variable. [May'12] **5 Marks**
 8. Write a program to make a square of a number and display the square. **Note:** take the number from user. [Nov'11] **5 Marks**
 9. Explain the basic data types in 'C' with example. [Nov'11, May'09] **5 Marks**
 10. Explain arithmetic and logical operators. [Nov'11] **5 Marks**
 11. Write note on 'C' programming language. [May'11, Nov'09] **5 Marks**
 12. Write a detailed note on operators in 'C' with examples. [Nov'10, May'09-08] **10 Marks**
 13. Explain data types in 'C' in detail with examples. [May'10] **10 Marks**
 14. What is 'C' programming language? Explain the following terms [May'09] **5 Marks**
 - i) History of 'C'
 - ii) Variable

Unit II

Programming Control

1. Write output of following program code and explain. [Nov'14]

5 Marks

```
void main ( )
{
    int x = 4, y = 0, z;
    While (x > =0)
    {
        If (x = -y)
        Break;
        Else
            printf (“\n%d%d”,x,y);
        x--;
        y++;
    }
}
```

2. Explain switch case statement with example. [Nov'14]
3. Make changes in following program so as to get output as,

5 Marks

Well Come All!!!!
In the world of C!!

```
void main ( )
{
    int j;
    for(j = 1; j<5; j++)
    {
        switch(j)
        {
            case 1 :printf(“Well\n”);
            Break;
            case2: printf(“ Come\n”)
            case3: printf(“All\n”);
            Default: printf(“!!!\n”);
        }
        printf(“In the world of C!!\n”);
    }
}
```

[Nov'13]

5 Marks

4. Explain the significance of 'break' and 'continue'. Where they are used, Explain with examples. [Nov'13, May'13] 5 Marks
5. Write a program to display all ODD numbers between 1 to 100 which are divisible by 7. [Nov'13] 5 Marks
6. Write a program to display all EVEN numbers between 1to 100 which are divisible by 7. [May'08] 5 Marks
7. Explain the difference between Do-while and while loop with example. [Nov'13 old] 5 Marks
8. Write a program to display numbers divisible by 7 in the range of 1 to 100. [May'13] 5 Marks

9. Write a program to check whether entered year is leap or not. [May'13] **5 Marks**
10. Write a program to display all EVEN numbers between 1 to 1000 which are divisible by 4. [Nov'12] **5 Marks**
11. Explain the use of switch case statement with example. [Nov'12] **5 Marks**
12. Explain the difference between break and continue statement. [Nov'12] **5 Marks**
13. Write a program to check whether entered number is prime or not. [Nov'12, May'08] **5 Marks**
14. If a four digit number is entered through keyboard, write a program to display sum of its first and last digits. (Ex. If entered number is 1234 then sum should be 5). [Nov'12] **5 Marks**
15. Write a note on conditional statement in C. [Nov'12] **5 Marks**
16. Write a program to display following pattern :
- ```

* * * * *
* * * *
* * *
* *
*

```
- [May'12] **5 Marks**
17. Write a program to check whether entered number is even or odd? [May'12] **5 Marks**
18. Explain while and do while statements. [Nov'11, Nov'10] **5 Marks**
19. Write a program to find the given number is positive, negative or zero. [Nov'11] **5 Marks**
20. Write a menu driven program which has following options.
- Addition
  - Subtraction
  - Multiplication
  - Exit.
- The program should ask two numbers to user and after giving a chose from menu it should perform the mathematical operation. [Nov'11] **5 Marks**
21. Explain following control structures along with an explain :
- a) If-else
  - b) For-loop
  - c) While-loop. [May'11] **5 Marks**
22. Write a menu –driven program in 'C' language which calculates :
- a) Area of a circle
  - b) Perimeter of a circle
  - c) Area of triangle
  - d) Volume of cube
  - e) Area of a rectangle
- Take the necessary input item for each case and show the result of each option. Do necessary calculation for each option. Use switch-case. [May'11] **5 Marks**
23. A four digit number is taken from the user. Write a program to check the sum of its digits is equal to 20. [Nov'10] **5 Marks**
24. Given three points  $(X_1, Y_1)$ ,  $(X_2, Y_2)$ , and  $(X_3, Y_3)$ . Write a program to check if all the three points fall on one straight line. [Nov'10] **5 Marks**
25. Write a program to display all combinations of 1, 2 and 3 using for loop. [Nov'10] **5 Marks**
26. Write a menu driven program which is having following menu:
- a) Display the square of the number entered by user.
  - b) Check the number is divisible by 7.
  - c) Exit.
- [Nov'10] **10 Marks**

27. If a four digit number is entered through keyboard, write a program to display the reverse of that number.
28. Write a menu driven program which is having following menu. [May'10] **5 Marks**
- Test the number is prime or not
  - Calculate square of the number
  - Exit
29. Write a program to display the following pattern, [May'10] **5 Marks**
- ```

1 2 3 4 5
1 2 3 4
1 2 3
1 2
1

```
30. What is control structures used in 'C' language? Explain following control,
- If – else
 - Switch – case. [Nov'09] **5 Marks**
31. Write a program in 'C' language which performs all the arithmetical operations. Take input as user defined and perform all the following operations :
- Addition
 - Subtraction
 - Multiplication
 - Division.
- Use switch-case statement. [May'09] **10 Marks**
32. Write a menu driven program which has following options
- Factorial of a number
 - Prime or not
 - Odd or even
 - Exit.
- Take the input number as user defined and result of all the options. [May'09] **10 Marks**
33. Write a program to display following patterns
- ```

1
2 3
4 5 6
7 8 9 10

```

## Unit III

### Array and String

1. Write the following program again by correcting the errors if any. Underline the corrected errors.

```

main()
{
 int arr[10]; j;
 for(j==0; j<=10; j++);
 {
 Scanf(“%d”, arr[i]);
 Sum+arr[i]=sum;
 Printf(“element = arr[i]);
 }
}

```

[Nov'13]

**5 Marks**

2. What is an array? Explain all types of arrays used in 'C' language along with syntax and example. [Nov'13, May'11, Nov'09, May'09] 5 Marks
3. Write a program which reads two 2x2 matrix from user and displays its addition. [Nov'13] 5 Marks
4. If a four digit number is entered through keyboard, write a program to display sum of its digits. (Ex. If entered number is 1234 then sum should be 10). [Nov'13 old] 5 Marks
5. Write a program which programs multiplication of 2 x 2 matrix and display its result in matrix form. [May'13, Nov'12] 5 Marks
6. Write a program which performs subtraction of 2 x 2 matrix and display its result in matrix form. [May'12] 5 Marks
7. Write a program to add 2 x 2 matrices and display the resultant matrix. [Nov'11] 5 Marks
8. Write a program to sort an array of 10 elements entered by user in descending order. [May'10] 5 Marks
9. Write a program to perform the multiplication of 3x3 matrix and display the result in matrix form. [May'08] 10 Marks

## Unit IV

### A. Structure

1. Write the program again by correcting the errors if any. Underline corrected errors. And also write the output.
 

```

#include<stdio.h>
#include<string.h>
void main ()
{
 struct
 {
 Char bookname [20];
 float price;
 }
 struct book b = {"GO Embedded!", 240.00};
 printf ("%s\n%f", b.price);
}

```

[Nov'14] **5 Marks**
2. Explain the difference structure and union. [May'13, Nov'10] 5 Marks
3. Define structure; explain the need and basics of structure in C with example. [May'12, May'10] 5 Marks
4. An employee structure holds information like employee code, name, address, city, pin code, date of birth, date of joining, designation, experience etc. Write a program to create the structure and enter same data in to it. Display the entered information. [May'11] 5 Marks
5. Explain about structure and union with an example. [May'11-09-08] 5 Marks
6. Partial definition of structures is given,
 

```

struct TIME
{
 int hour;
 int min;
};

```

Write a program using structure to perform addition of two times and display the result in HH: MM format. [May'08] **10 Marks**

## Unit IV

### B. Function

1. Write the same program; indicate function definition, call and declaration. What will be the output of the program?

```
#include<stdio.h>
void display ();
main ()
{
 printf("Learn C\n");
 display ();
}
void display ()
{
 printf("Followed by C++, # and Java !");
}
```

[Nov'14]

5 Marks

2. What is a function? Why there is a need of writing function?[Nov'10]

5 Marks

3. Write a program to calculate the real roots of the quadratic equation  $ax^2 + bx + c = 0$  using the

quadratic formula  $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

[Nov'10]

10 Marks

## Unit V

### Basics of Pointers

1. Write correct output with detailed explanation. Assume suitable data if required.

```
void main ()
{
 int a = 30;
 int *b;
 int **c;
 b = &a;
 c = &b;
 printf("&a=%u\n", &a);
 printf("&a=%u\n", b);
 printf("a=%d\n", *(&a));
 printf("&b=%u\n", **c);
 printf("a=%d\n", **c);
}
```

[Nov'13]

5 Marks

2. Explain call by value and call by reference with example. [Nov'14, Nov'10]

5 Marks

3. Explain the difference between call by value and call by reference

with example programs. [Nov'13 old, May'13, Nov'12, Nov'11, May'08]

5 Marks

4. Explain the use of Logical operators & and \* used with pointer variables. [May'12]

5 Marks

5. What is pointer? Explain the "&" and "\*" operators. [May'11]

5 Marks

6. What is the pointer? Give simple example of pointer to structure. [May'09-08]

10 Marks

- [1] Write a detailed note on file opening modes in C. [Nov'13 old, Nov'11]

5 Marks

- [2] Write a program to copy contents of one file into another file. [May'12]

5 Marks

- [3] What are the different file handing functions? Explain each function in detail with an example. [May'11-10]

5 Marks

- [4] Write a program using files to count character, new lines and spaces in is file. [May'10]

10 Marks