

Anekant Education Society's  
**Tulajaram Chaturchand College of Arts, Science And Commerce, Baramati**  
**Department Of Electronics**

**Class - M.Sc. 1 (2019-2020)**

**Subject- Advanced C Programming [ELE4104]**

**Question Bank**

• **Questions for 2 marks**

1. What are the constants used in C?
2. Explain bitwise left shift operator?
3. What is unary operator?
4. Explain putchar()?
5. What is an expression? How is an expression differing from variables?
6. Explain primary data types used in C?
7. Explain escape sequence character in C?
8. What is use of if statement?
9. write a syntax of while loop?
10. what is output of following program?  

```
int m=1,n=2;
for(j=1;j<=2;j=j+1)
{ m=m+1;
n=n*j;
printf(“%d \t %d\t” ,m,n);
}
```
11. which of different types of loop statement used in C?
12. Explain for loop?
13. Enlist different format specifier in C?
14. What is an array?
15. What is output of following program?  

```
main()
{ int a[7]={ 11,12,13,14,15,16,17};
int i;
printf(“content of array”);
for(i=0;i<=6;++i);
{ printf(“%d\t”,a[i]); }
}
```
16. What are the rules to declare one dimensional array?
17. What is multidimensional array?
18. explain- a) strlen() b) strcat()
19. What is function?
20. Explain recursion?
21. What is call by value?
22. Explain any two string functions?
24. What is pointer?
25. Difference between union and structure

26. explain – a) line() b) circle()
27. Explain any two graphics function?
28. Explain - a) getch() b) putc()
29. Explain any two file handling function?
30. Explain macros?
31. Explain #include?
32. Explain dynamic memory allocation?
33. State three advantages of function?
34. What is purpose of keyword void?
35. Determine the value of each of following expression  

$$\text{int } i=8, j=j; \text{ a) } (3 * i - 2 * j) \% (2 * d - c) \text{ b) } (i > 0) \ \&\& \ (j < 5)$$
36. What is mean by associativity?
37. If  $x = 8.8, y = 3.5, z = -5.2$ , then determine value of following expression  

$$\text{a) } 2 * y + 3 * (x - z) \text{ b) } 2 * x / (3 * y)$$
38. Describe arithmetic operator?
39. Explain scanf();
40. Difference between formatted & unformatted statement ?
41. What is command line argument?
42. How static variable are define and initialized?
43. What is mean by storage class of variable?
44. Write a program to find largest between two numbers?

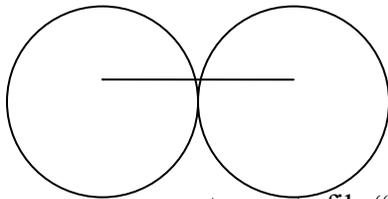
• **Questions for 4 marks**

1. Explain different data types used in C language?
2. Explain in brief structure of C programming?
3. what is operator? enlist all operators used in C?
4. Explain the difference between '=' and '==' operator explain with example?
5. Write a short note precedence & order of evaluation?
6. Differentiate between relational and logical operators used in C?
7. what is variable? What are the rules for defining variables?
8. Explain symbolic constants used in C?
9. Explain with example ++i and i++.
10. Explain logical operators and expressions used in C?
11. Explain the following functions  
 i) getch() and ii) clrscr()
12. Explain printf() function with an example
13. Explain syntax and use of Do\_\_While statement
14. Explain explain continue and break statements
15. Explain switch statement with its syntax and example.
16. Explain nested for loop with an example
17. What is array? How to declare array? Explain with suitable example.
18. Explain applications of array
19. Explain any 4 string functions with suitable example?
20. What is the difference between call by value and call by reference
21. What is recursion explain with suitable example.
22. Explain Automatic storage class specifier
23. Explain Static storage class
24. Explain Register storage class

25. Explain Extern storage class
26. For what purpose '\0' is used in string operations explain with suitable example.
27. What is function ?how function is defined.
28. Explain the difference between calling function and called function?
29. Explain pointer to structure in detail.
30. Explain pointer to function in detail.
31. Explain any one dynamic memory allocation
32. Explain how to access a value using pointer?give a suitable example.
33. Write a short note on pointer to pointer
34. Distinguish bet malloc and calloc()
35. What is structure?explain with suitable example
36. Explain array of structure with example
37. Explain Nested structure with example.
38. What is graphics? Enlist the different types of functions used in C
39. Explain the following graphic function by writing a small program  
**initgraph()**
40. Explain the following graphic function by writing a small program  
**line()**
41. Explain the following graphic function by writing a small program  
**rectangle()**
42. Explain i)fprintf() ii)fscanf()
43. Explain the following i)rewind ii)feof
44. Explain command line argument with example
45. What is macro? Explain with example
46. Explain function with argument and return type.
47. Explain array of pointers.
48. Define array and how two – dimensional array is initialize?
49. Explain pointer to structure.
50. What are static variable? Compare with standard local variable.
51. Explain \* operator and & operator with example.
52. What are the rule of to use period(.) operator.
53. Explain is EOF and BOF.
54. What is EOF and what value does usually have ?
55. What are identifier and keywords? Explain it with suitable example.
56. What is type casting? Explain it with suitable example.
57. What is swaping? Explain it with suitable example.
58. Write a short note on ternary operator and cast operator.
59. What is character constant? How is character constant is differ from integer constant?
60. What is the difference between structure declaration and structure initialization
61. What is the advantage of UNION in C?
62. What do the 'c' and 'v' in argc and argv stand for?
63. Difference between syntax vs logical error?
64. Which bitwise operator is suitable for checking whether a particular bit is ON or OFF?
65. What is enumeration constants?
66. Write a note on graphics mode.
67. Explain the term overloading in C++.

- **Questions for 6 marks**

1. Write a C language program to swap two numbers using function.
2. Write a C language program to calculate the series-  
 $1/1! + 2/2! + 3/3! + \dots$  Up to n terms.
3. Write a C language program to display the content of file using command line argument.
4. Write a C language program to copy the contents of one file to another file.
5. Write a C language program to count number of lines and words in a file.
6. Write a C language program to find out sum of the following series  
 $1! + 2! + 3! + \dots + n!$
7. Write a C language program to enter n elements in array and find Sum of all elements.
8. Write a C language program to check whether given number is prime or not.
9. Write a C language program using recursive function to enter 4 digit number and find the sum of all digits of the number .
10. Write a C language program to program to find whether given number is armstrong or not.  
(e.g.  $153=13+53+33=153$ )
11. Write a C language program to find whether given number is palindrome or not.
12. Write a C language program to find GCD of given two numbers.
13. Write a C language program which will read string and count the number of characters and words in it.
14. Write a C language program to read two matrices and add them.
15. Write a C language program to input number and find a largest digit in a given number and print it in word with appropriate message.  
(e.g.  $n=5273$  - “SEVEN is largest”)
16. Write a C language program to compute following series  
 $G= 1+ x^3/3! + x^5 /5! + x^7/7! + \dots$  up to n terms.
17. Write a C language program to read n numbers in an array and split the array into two arrays even and odd such that the array even contains all the even numbers and other is odd. So the output will be—  
(e.g. Original array is 7,9,4,6,5,3,2,10,18  
Odd array is 7,9,5,3  
Even array is 4,6,2,10,18 )
18. Write a C language program to draw



19. Write a C language program to create file “odd” to store all odd numbers between 1 and n.
20. Write a C language program to draw – using graphics.
21. Write a C language program using structure to define employee record containing employee number , name and salary. Read 10 records.
22. Write a C language program to demonstrate the use of union.
23. Write a C language program using command line argument to calculate area of a rectangle.
24. Write a C language program using recursion n terms of Fibonacci series.
25. Write a C language program using recursion to calculate factorial of given number.
26. Distinguish between character constant and string constant.
27. Describe all operators used in C language with example.
28. State and explain formatted input-output statements and standard input-output statements with example.

29. Explain in detail call by value and call by reference with example.
30. Explain the following using general syntax and example .
  - i) if ii) if-else
- 31 . Explain break and continue statements using syntax and example .
32. Define array. Explain different types of array in detail.
33. Explain function with return and function with arguments with example.
34. State and explain different types of string functions with example.
35. Explain dynamic memory allocation and releasing dynamically allocated memory.
36. Define structure and union. Explain the way of declaring and accessing them.
37. What do you mean by pre-processor directives? List and explain its different categories.
38. Explain following in detail i) initgraph() ii) circle() iii) rectangle()
39. Write a C language program to enter n elements in array and find second largest number from array.
40. Write a short note on objects and class in C++.

• **Questions for 12 marks**

1. Write a C language program to draw '+' sign at the center of the screen.
- 2 . Write a C language program for multiplication table of given number.
3. Write a C language program to replace a specified line in a text file.
4. Write a C language program to find equivalent capacitance to parallel combination of capacitive circuit.
5. Write a C language program to shift inputted data by 3 to the right.
6. Write a C language program to use switch statement to display Monday to Sunday.
7. Write a C language program to draw a triangle using graphics function.
8. Write a C language program to draw concentric circles.
9. Write a graphics program to display text at current position.
10. Write a graphics program using function floodfill().
11. Write a C language program to swap two numbers without using third variable.
- 12 .Write a C program to draw a hut and color it using graphics.