

## **Unit-I**

What is the difference between a compiler and an interpreter? Give examples.

What is an algorithm? Briefly explain several characteristics.

Write an algorithm to find square root of a quadratic equation.

Differentiate between syntax errors, logical errors, and runtime errors with examples.

What is flow chart? Explain several parameters used in it.

Write an algorithm check whether a given number is prime. Draw the flow cart.

What are operators in C? Explain different types of operators with examples.

## **Unit-II**

Write a program to input and display 5 elements of an integer array.

Define two-dimensional arrays? How to declare two-dimensional arrays?

Explain about the following string handling functions with example programs.

(i)strlen() (ii) strcpy() (iii) strcmp() (iv) strcat()

Write a program to find the transpose of a matrix.

Define pointers in C. Explain how pointers are declared and initialized. Discuss the importance of pointers with examples.

Define a structure type book, that would contain book name, author, pages and price. Write a program to read this data using member operator (".") and display the same.

Explain the difference between structures and unions with a comparative table and suitable examples.

Explain in brief about pointers to structures .Write a c program to demonstrate pointer to structures

Explain about Self Referential structures with an example program.

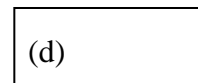
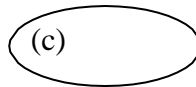
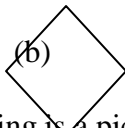
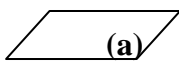
## **Unit-iii**

Explain with a program function with no arguments but with a return value.

Explain the parameter passing mechanism in C Language with Example.

## Objectives

- Which of the following is used to perform computations on the entered data?  
a. Memory **(B) Processor** (C) Input device (D) Output device
- Which of the following is not an input device?  
a. **Plotter** (B) Scanner (C) Keyboard (D) Mouse
- Which of the following is not an output device?  
a. (a) Plotter Speaker **(b) Scanner** (c) Printer(d)
- Which of the following is used as a primary memory of the computer?  
**a.** (a) Magnetic storage device **(b) RAM**  
b. (c) Optical storage device (d) Magneto-optical storage device
- Which one of the following is a volatile memory?  
a. (a) **RAM** (b) Auxiliary memory (c) ROM  
(d) Secondary memory
- Software is defined as  
a. (a) Set of memory cells **(b) Set of Programs** (c) Set of hardware (d) None
- Which statement is a valid?  
a. (a) **1KB=1024 bytes** (b) 1 MB=2018 bytes  
b. (c) 1 MB=10000 kilobytes (d) i KB=100 bytes
- \_\_symbol is used for input/output in flowchart



- Which of the following is a pictorial representation of an algorithm?  
a. Program **(b) Flowchart** (c) Algorithm (d) Pseudo code
- Among the following, which converts assembly language into machine language  
(a) Interpreter (b) Compiler **(c) Assembler** (d) Algorithm
- 11.\_translates high level language into machine language  
**(a) Compiler** (b) Translator(c) Processor (d)Loader
11. The size of -char|| data type is \_\_\_\_  
a. **(a) 1 byte** (b) 2 bytes (c) 4 bytes (d) 10 bytes
12. The format specifier that is used to read or write a character is \_\_\_\_  
a. (a) %f (b) %d **(c) %c** (d) %s
13. Which one of the following is a string constant  
a. (a) \_3' **(b) "hello"** (c) 30 (d) None
14. If no precision is specified for floating point number then printf() prints\_\_\_\_\_decimalpositions.  
a. (a) Two (b)Four **(c) Six** (d) Zero
15. Which of the following operator is used to combine two or more relational expressions  
**a.** (a) ^ (b) ~ (c) & **(d) &&**
16. ~(100111) gives \_\_\_\_

- a. (a) 010010                      **(b) 011000**      (c) 010100    (d) 111001
17. \_\_operators are used for shifting bits to right and left  
a. >> **and** <<                      (b) > and <                      (c) ?and :                      (d) None
18. The expression a++ is referred as  
a. Pre increment                      **(b) Post increment**      (c) Before increment    (d) After increment
19. The expression ++a referred as  
**a)Pre increment**                      (b) Post increment      (c) Before increment    (d) After increment
20. \_\_defines the order of evaluation when operators have the same precedence  
a) Priority (b) Precedence **(c) Associativity** (d) None of the above
20. Which one of the following is having highest precedence  
(a) ++ (b) &&      **(c) ( )**                      (d) ,
21. Character constants are enclosed in  
a. **(a) ,, ,,**      (b) — —                      (c) ( )                      (d) [ ]
22. The escape sequence character \_\_causes the cursor to move to the next line on the screen  
a. (a) \t      **(b) \n**                      (c) \r                      (d) \v
23. The assignment statement —sum=sum+i;|| is equivalent to  
a. (A) sum+=i;      **(B) sum+=i;**                      (C) sum= =sum+i;      (D) None
24. sizeof() operator returns the size of an operand in \_\_\_\_\_  
a. (A) Bits                      (B) Nibble                      **(C) Bytes**                      (D) None
25. Which of the following is not a loop structure?  
a. for    (b) do-while                      **(c) repeat-until**                      (d) while
26. If statement is a \_\_\_\_\_statement  
a. One-way decision    (b) Multi-way decision    **(c) Two way decision**                      (d) Loop construct
27. \_\_break\_\_ statement in a loop is used for  
a. **Terminating the loop**                      (b) De-allocating memory  
b. (c) Terminating the program      (d) Terminating the function
28. The keyword -else|| can be used with  
a. for statement                      (b) do.. while ( ) statement                      **(c) if statement**      (d) switch ( ) statement
29. The two different ways to implement a multiway selection in C are  
a. Simple if and if-else                      (b) if-else and nested if-else  
b. **(c) else-if ladder and switch**                      (d) None
30. The minimum number of time that a do-while loop executes  
a. 0 **(b) 1**                      (c) infinitely      (d) variable
31. The while loop is terminated when the conditional expression returns  
**a. 1** (b) 2                      (c) 3                      **(d) Zero**
32. C provides \_\_\_\_\_as a convenient alternative to the traditional if-else for two wayselection.

- a. **Conditional operator** (b) Short hand assignment (c) Increment (d) None
33. The statement used to send back any value to the calling function is  
a. **break** (b) continue (c) exit (d) **return**
34. The \_\_\_\_\_ statement is used to skip the remaining part of the statements in a loop and continue with next iteration.  
a. break (b) goto (c) **continue** (d) exit
35. break statement can use with  
a. i) loop ii) switch iii) block  
b. (a) **only i, ii** (b) only ii, iii (c) only i, iii (d) All
36. What are the entry controlled loops among the following  
a. i. while ii. Do-while iii. For  
(a) only i (b) only ii, iii (c) only iii (d) **only i, iii**
37. Array is an example of which of the following?  
a. **Derived types** (b) Fundamental types (c) User-defined types (d) None
38. Which of the following is used to display a string on the screen?  
(a) **%s** (b) %c (c) %d (d) %f
39. Which of the following is exit controlled loop  
a. for (b) while (c) **do-while** (d) None
40. How many bytes the array **price** occupies. float price[10];  
a. 10 bytes (b) 4 bytes (c) **40 bytes** (d) 20 bytes

## **UNIT-2**

1. Array is an example of which of the following?  
a. **Derived types** (b) fundamental types (c) user-defined types (d) None
2. Array elements are stored in  
a. Scattered memory locations (b) **Sequential memory locations**
3. Direct memory locations (d) None
4. int a[10] will reserve how many locations in the memory?  
a. **10** (b) 9 (c) 11 (d) None of the above
5. Which one of the following is the correct syntax for initialization of one-dimensional arrays?  
(a) int num[3]={0 0 0}; (b) **int num[3]={0,0,0};**  
a. (c) int num[3]={0;0;0}; (d) int num[3]=0;
6. Which of following is correct array declaration  
a. A) int num(25); B) int array num[25]; C) **int num[25];** D) num[25];
7. Array subscripts in ‘C’ starts from  
**A) 0** B) compiler dependent C) 1 D) -1
8. Which of the following statements is used to read a string of characters into the array **words**?  
A) scanf(“%d\\”, words); B) **scanf(“%s\\n\\”, words);**

- C) `scanf("%s", words);`      D) `scanf(- %c\, words);`
9. Which of the following multi-dimensional array declaration is correct for realizing a 2 X 3 matrix
- (a) **`int m[2][3];`**      (b) `int m[3][2];`      (c) `int m[3],m[2];`      (d) None
10. Which of the following is the correct syntax for initialization of two-dimensional arrays?
- a) **`table[2][3]={0,0,0,1,1,1}`**  
 b) `table[2][3]={0,0,0},{1,1,1}`  
 c) `table[2][3]={0,1},{0,1},{0,1}`      (d) None
11. What will be assigned for `marks[3]` and `marks[4]` in the following initialization  
`int marks[5]={30,45,80};`
- a. 80 and garbage      (b) garbage and garbage      (c) **0 and 0**      (d) None
12. Which of the following is correct initialization of string TITAN
- a. `char name[ ]="TITAN\0"`      (b) `char name[10]="TITAN\0"`  
 b. **(c) `char name[ ]="TITAN"`**      (d) `char name[ 10]={-TITAN\}`
13. How to refer an element in  $i^{\text{th}}$  row  $j^{\text{th}}$  column of a two dimensional array
- a. (a) `x[i,j]`      (b) **`x[i][j]`**      (c) `x[ij]`      (d) `x[i]x[j]`
14. Address stored in pointer variable is of
- a. type  
 b. **Integer**      B.character      C. Float      D.Double
15. Pointer variable is declared using preceding with
- i. sign  
 A. %      B.&      C.^      **D.\***
16. \* is called as \_\_\_\_\_
- a. **Value at pointer**      B.Address operator      C. Scope resolution operator      D.None
17. Multiple indirection operator is \_\_\_\_\_
- a. **A.-->**      B.&      C.\*      **D.\*\***
18. Prior to using a pointer
- a. it should be declared      B. it should be initialized  
 b. **C. it should be declared and initialized**      D.None
19. A pointer to pointer points to the address of a
- a. Structure      B.Union      C.Array      **D.Pointer**
20. A pointer is
- a. A keyword used to create variables  
 b. A variable that stores address of an instruction  
 c. **A variable that stores address of other variable**  
 d. All of the above
21. The operator used to get value at address stored in a pointer variable is
- (a)\*      (b) &      (c) &&      (d) ||
22. Which one of the following is a string constant?
- (a) `_3`      (b) **"hello"**      (c) 30      (d) None
22. Which of the following is used to display a string on the screen?

- a. **(a) %s** (b) %c (c) %d (d) %f
23. Which of the following is used to determine the length of a string?  
a. **(a) strlen** (b) strcmp (c) strcpy (d) strcat
24. Which of the following is the correct syntax for copying a string S1 into S2?  
a. **(a) strcpy(S2,S1);** (b) strcpy(S1,S2); (c) strcmp(S1.S2); (d) strcmp(S2,S1);
25. The function **strcat(S2,S1)** appends \_\_\_\_\_ to \_\_\_\_\_  
a. **(a) S1,S2** (b) S2,S1 (c) S2,S2 (d) S1,S1
26. Which of the following is used to read a string  
a. (a) getchar() **(b) gets()** (c) getstr() (d) getch()
27. Which of the following header file is required for performing string operations  
a. (a) stdio.h (b) conio.h **(c) string.h** (d) ctype.h
28. If the two strings are identical, then strcmp() returns \_\_\_\_\_  
(a) -1 (b) 1 **(c) 0** (d) yes
29. Which function is used to reverse the string?  
a. (a) reverse() **(b) strrev()** (c) rev() (d) None
30. What will be the output of the program?  
void main()  
i. {  
ii. char str1[20] = "Hello",  
str2[20] = " World";  
printf("%sn",  
strcpy(str2,  
strcat(str1, str2)));  
iii. }
- b. **(a) HelloWorld** (b) World (c) WorldHello (d) Hello
31. String concatenation means  
**(a) Combining two strings** (b) Extracting a substring out of a string  
(c) Comparing two strings (d) partitioning the string into two strings
32. Which of the following is true for definition of a structure \_\_\_\_\_  
a. Items of the same data type **B) Items of the different data type**  
b. C)Integers with user defined names D) List of Strings
33. The keyword used to define a structure is \_\_\_\_\_  
a.stru **B) struct** C) structure D) STRUC
34. The operator used to access the structure member is \_\_\_\_\_  
a. A) \* B) & **C) .** D) |
35. Which of the following is correct for a Structure definition?  
a. Scalar data type **B) Derived data type** C) Enumerated type D) Null Type
36. When accessing a structure member, the identifier to the left of the dot operator is  
a.A structure member **B) The structure tag**

- b. **C) A structure variable** D) The keyword struct
37. The operator used to find the size of any variable \_\_\_\_\_  
a. **sizeof()** B) sizeof() C) size of() D) size()
38. Union can store \_\_\_\_\_ number of values at a time  
a. All its members B) **Only 1** C) 2 D) Cannot hold value
39. Which of the following is a list of named integer constants?  
a. typedef B) **enumeration** C) structure D) union

### Unit-3

1. A function can be called in a program  
A. Only two times B. Only once C. **Any number of times** D. Only three times
2. When you pass an array as an argument to a function, what actually gets passed  
A. **Address of the array** B. Values of the elements of the array  
C. Number of elements of the array D. None
3. The statement used to send back any value to the calling function is  
A. break B. continue C. exit D. **return**
4. The function sqrt( ) is part of header file.  
A. conio.h B. stdio.h C. **math.h** D. iostream.h
5. A function can return only value  
A. Zero B. **One** C. two D. three