

Array & String

1. Array index start at
- (a) 1
 - (b) User Defined
 - (c) 0
 - (d) None of above

Answer:

Option (c)

2. Every string is terminated by NULL character. How it is represented?
- (a) '\0'
 - (b) NULL
 - (c) Both a & b
 - (d) none of above

Answer:

Option (a)

3. Which of the following is used as a string termination character?
- (a) 0
 - (b) \0
 - (c) /0
 - (d) None of these

Answer:

Option (b)

4. The format specifier to accept a string is
- (a) %c
 - (b) %d
 - (c) %f
 - (d) %s

Answer:

Option (d)

5. Which header file is necessary for strlen() function?
- (a) conio.h
 - (b) strings.h
 - (c) string.h

(d) `stdio.h`

Answer:

Option (c)

6. What is an array in C language?
- (a) A group of elements of same data type
 - (b) An array contains more than one element
 - (c) Array elements are stored in memory in continuous or contiguous locations
 - (d) All of these

Answer:

Option (d)

7. How do you initialize an array in C?
- (a) `int arr[3] = (1,2,3);`
 - (b) `int arr(3) = {1,2,3};`
 - (c) `int arr[3] = {1,2,3};`
 - (d) `int arr(3) = (1,2,3);`

Answer:

Option (c)

8. Assuming `int` is of 4bytes, what is the size of `int arr[15];`?
- (a) 30
 - (b) 15
 - (c) 4
 - (d) 60

Answer:

Option (d)

9. The index of the first element in an array is _____
- (a) 0
 - (b) -1
 - (c) 1
 - (d) 2

Answer:

Option (a)

10. What is the output?

```
void main()  
{
```

```
int a[4]={5,6,7,8};
printf("%d",a[1]);
}
```

- (a) 5
- (b) 6
- (c) 8
- (d) None of these

Answer:

Option (b)

11. What is the output?

```
void main()
{
    int a[4]={5,6,7,8};
    printf("%d",a[4]);
}
```

- (a) 5
- (b) 6
- (c) 8
- (d) None of these

Answer:

Option (d)

12. What is the output?

```
void main()
{
    int a[] = {1,2,3,4};
    int b[4] = {5,6,7,8};
    printf("%d,%d", a[0], b[0]);
}
```

- (a) 1,5
- (b) 0,0
- (c) 2,6
- (d) Compiler error

Answer:

Option (a)

13. What is the output?

```
void main()
```

```
{
    int a[3] = {10,12,14};
    a[1]=20;
    int i=0;
    while(i<3)
    {
        printf("%d ", a[i]);
        i++;
    }
}
```

- (a) 20 12 14
- (b) 10 20 14
- (c) 10 12 20
- (d) Compiler error

Answer:

Option **(b)**

14. If we need to store word "INDIA" then which is correct syntax?

- (a) char name[6] = {"I","N","D","I","A"}
- (b) char name[6] = {'I','N','D','I','A','\0'}
- (c) char name[6] = {'I','N','D','I','A'}
- (d) None of these

Answer:

Option **(b)**

15. What happens when you try to access an array variable outside its size?

- (a) Compiler error is thrown
- (b) 1 value will be returned
- (c) 0 value will be returned
- (d) Some garbage value will be returned

Answer:

Option **(d)**

16. How many elements will be declared if an array declared like below
int a[7];

- (a) 6
- (b) 7
- (c) 8
- (d) None of these

Answer:

Option **(b)**

17. How many elements will be declared if an array declared like below
int a[3][4];
- (a) 8
 - (b) 6
 - (c) 12
 - (d) 9

Answer:

Option **(c)**

18. Which of the following is correct initialization?
- (a) int a[3][3]={{1,2,3},{4,5,6},{7,8,9}};
 - (b) int a[][2] = {{1,2},{3,4}};
 - (c) int a[3][3]={1,2,3,4,5,6,7,8,9};
 - (d) All of these

Answer:

Option **(d)**

19. Which of the following is a two-dimensional array?
- (a) array anarray[20][20];
 - (b) int anarray[20][20];
 - (c) int array[20, 20];
 - (d) char array[20];

Answer:

Option **(b)**

20. What is the output?
- ```
void main()
{
 int a[2][3] = {
 {0},
 {0}
 };
 printf("%d", a[1][2]);
}
```
- (a) 0
  - (b) 1
  - (c) Garbage value

(d) Compiler error

Answer:

Option (a)

**21.** What is the output?

```
int main()
{
 int ary[3][2] = {1,2,3,4,5,6};
 printf("%d,%d", ary[0][0], ary[2][1]);
}
```

(a) 2,5

(b) 1,6

(c) 1,5

(d) 2,6

Answer:

Option (b)

**22.** What is the format specifier used to print a String or Character array in C printf() or scanf () function?

(a) %c

(b) %s

(c) %C

(d) %d

Answer:

Option (b)

**23.** What is the output?

```
void main()
{
 char ary[]="Programming in C";
 printf("%s",ary);
}
```

(a) Programming in C

(b) P

(c) Programming

(d) Compiler error

Answer:

Option (a)

**24.** What is the output?

```
void main()
{
 char str[25];
 scanf("%s",str);
 printf("%s",str);
}
//input: Programming in C
```

- (a) Programming in C
- (b) P
- (c) Programming
- (d) Compiler error

Answer:

**Option (c)**

**25.** What is the output?

```
void main()
{
 char str[]{"C","A","T","\0"};
 printf("%s",str);
}
```

- (a) C
- (b) CAT
- (c) CAT\0
- (d) Compiler error

Answer:

**Option (d)**

**26.** What is the output?

```
void main()
{
 char str[2];
 int i=0;
 scanf("%s", str);
 while(str[i] != '\0')
 {
 printf("%c", str[i]); i++;
 }
}
//Input: INDIA
```

- (a) IN

- (b) I
- (c) INDIA
- (d) Compiler error

Answer:

Option (c)

- 27.** How do you accept a multi-word input in C language.?
- (a) scanf()
  - (b) gets()
  - (c) getc()
  - (d) None of these

Answer:

Option (b)

- 28.** Choose the correct C sentence about strings.
- (a) printf() is capable of printing a multi-word string.
  - (b) puts() is capable of printing a multi-word string.
  - (c) gets() is capable of accepting a multi-word string.
  - (d) All of these

Answer:

Option (d)

- 29.** If the two strings are identical, then strcmp() function returns
- (a) -1
  - (b) 1
  - (c) 0
  - (d) True

Answer:

Option (c)

- 30.** Which function will you choose to merge two words?
- (a) strcpy()
  - (b) strjoin()
  - (c) strcat()
  - (d) strmerge()

Answer:

Option (c)



31. Which function appends not more than n characters?

- (a) strcat()
- (b) strncat()
- (c) strcon()
- (d) None of these

Answer:

Option (b)

32. Which of the given options compares at most n characters of string ch to string s?

- (a) strncmp(ch, s, n)
- (b) strncmp(s, ch, n)
- (c) strcmp(ch, s)
- (d) strcmp(s, ch)

Answer:

Option (a)

33. What is the output?

```
void main()
{
 char str1[20]="Hello",str2[20]=" World";
 printf("%s\n", strcpy(str1, strcat(str1, str2)));
}
```

- (a) Hello
- (b) Hello World
- (c) WorldHello
- (d) None of these

Answer:

Option (b)

34. Which function will you use to find the last occurrence of a character in a string?

- (a) strnchar()
- (b) strrchar()
- (c) strchar()
- (d) strrchr()

Answer:

Option (b)

35. The char data type in C program occupies \_\_\_\_\_ byte of space in memory.

- (a) 1
- (b) 2
- (c) 4
- (d) None of these

Answer:  
Option (a)

- 36.** Structure can contain elements of the different data type
- (a) True
  - (b) False

Answer:  
Option (a)

- 37.** Which of the following operator is used to select a member of a structure variable
- (a) .(dot)
  - (b) ,(comma)
  - (c) :(colon)
  - (d) ;(semicolon)

Answer:  
Option (a)

- 38.** Structure can contain elements of the same data type.
- (a) True
  - (b) False

Answer:  
Option (a)

- 39.** What is a structure in C language?
- (a) A structure is a collection of elements that can be of the same data type.
  - (b) A structure is a collection of elements that can be of the different data type.
  - (c) Elements of a structure are called members.
  - (d) All of these

Answer:  
Option (d)

- 40.** What is the size of a C structure?
- (a) C structure is always 128 bytes.

- (b) Size of C structure is the total bytes of all elements of structure.
- (c) Size of C structure is the size of largest element.
- (d) None of these

Answer:

Option (b)

41. What will be the size of the following structure? (Consider integer occupies – 4 bytes)

```
struct temp
{
 int a[10];
 char p;
};
```

- (a) 5
- (b) 11
- (c) 41
- (d) 44

Answer:

Option (c)

42. Which of the following cannot be a structure member?

- (a) Another structure
- (b) Array
- (c) Function
- (d) None of these

Answer:

Option (c)

43. What is the output?

```
struct student
{
 int no;
 char name[20];
};
void main()
{
 struct student s;
 s.no = 8;
 printf("%d", s.no);
}
```

- (a) 8
- (b) Compiler error
- (c) Blank
- (d) Runtime error

Answer:

**Option (a)**

**44.**What is the output?

```
struct student
{
 int no = 5;
 char name[20];
};
void main()
{
 struct student s;
 s.no = 8;
 printf("%d",s.no);
}
```

- (a) 8
- (b) Compiler error
- (c) 5
- (d) Runtime error

Answer:

**Option (b)**

**45.**What is the output?

```
struct student
{
 int no;
 char name[20];
};
void main()
{
 student s;
 s.no = 8;
 printf("%d",s.no);
}
```

- (a) 8
- (b) Compiler error
- (c) Blank

(d) Runtime error

Answer:

Option (b)

**46.** Which of the following accesses a variable in structure b?

- (a) b->var;
- (b) b.var;
- (c) b-var;
- (d) b>var;

Answer:

Option (b)

**47.** Which of the following accesses a variable in structure \*b?

- (a) b->var;
- (b) b.var;
- (c) b-var;
- (d) b>var;

Answer:

Option (a)

**48.** What is the output?

```
struct pens
{
 int color;
}p1[2];
void main()
{
 struct pens p2[3];
 p1[0].color=5;
 p1[1].color=9;
 printf("%d, ",p1[0].color);
 printf("%d",p1[1].color);
}
```

- (a) 5, 5
- (b) 5, 9
- (c) 9, 5
- (d) Compiler error

Answer:

Option (b)

49. What is the output?

```
struct student
{
 char *name;
};
struct student s[2];
void main()
{
 s[0].name = "alan";
 s[1] = s[0];
 printf("%s %s", s[0].name, s[1].name);
 s[1].name = "turing";
 printf("\n%s %s", s[0].name, s[1].name);
}
```

- (a) alan alan  
alan turing
- (b) alan alan  
turing turing
- (c) alan turing  
alan turing
- (d) None of these

Answer:

Option (a)

50. What is the output?

```
struct point
{
 int x;
 int y;
} p[] = {1, 2, 3, 4};
int main()
{
 printf("%d %d\n", p[0].x, p[1].y);
 printf("%d %d\n", p[2].x, p[3].y);
}
```

- (a) 1 2  
3 4
- (b) 1 0  
2 0
- (c) Compiler Error

(d) Blank

Answer:

Option (a)

**51.** The correct syntax to access the member of the ith structure in the array of structures is?

```
struct temp
{
 int b;
}s[50];
```

(a) s.b[i];

(b) s[i].b;

(c) s.b[i];

(d) s[i].b;

Answer:

Option (d)

**52.** What is the output?

```
void main()
{
 struct book
 {
 int pages;
 };
 struct book b,*ptr;
 b.pages = 100;
 ptr = &b;
 printf("%d ", b.pages);
 printf("\n%d ", ptr->pages);
}
```

(a) Compiler error

(b) 100  
100

(c) 100  
Blank

(d) 100  
Address of b

Answer:

Option (b)

53. Structure can contain elements of the different data type

- (a) true
- (b) false

54. Which of the following operator is used to select a member of a structure

- (a) .(dot)
- (b) ,(comma)
- (c) : (colon)
- (d) ;(semicolon)

55. Default value of global variable is

- (a) 0
- (b) Garbage value
- (c) 1
- (d) Depend on datatype

56. Default value of local variable is

- (a) Garbage value
- (b) 0
- (c) 1
- (d) Depend on data type

57. MACRO is used to \_\_\_\_\_

- (a) Save memory
- (b) Both a & c
- (c) fast execution
- (d) none of above

58. Which of the following operator is used to select a member of a structure variable

- (a) .(dot)
- (b) ,(comma)
- (c) : (colon)
- (d) ;(semicolon)

59. What is the output of the following code:

```
void main()
{
```



```
enum day { Mon,Tue,Wed,Thu,Fri,Sat,Sun};
printf("%d",Fri);
getch();
}
```

- (a) 5
- (b) Error
- (c) 4**
- (d) Fri

60. Which of the following is used as a string termination character?

- (a) 0
- (b) \0**
- (c) /0
- (d) None of these

61. Which of the following function is more appropriate for reading in a multi word string?

- (a) printf();
- (b) scanf();
- (c) gets();**
- (d) puts();

62. Array index start at

- (a) 1
- (b) User Defined
- (c) 0**
- (d) None of above

63. Every string is terminated by NULL character. How it is represented?

- (a) '\0'**
- (b) NULL
- (c) both a and b
- (d) None of above

64. The format string to accept a string is

- (a)%c
- (b)%d
- (c)%f
- (d)%s**

65. Which header file is necessary for strlen() function?

- (a)conio.h
- (b)strings.h
- (c)string.h**
- (d)stdio.h

66. What is the output of this program?

```
include <stdio.h>
#define int char
main()
{
 int i=50;
 printf ("sizeof (i) =%d", sizeof (i));
}
```

- A. 2
- B. 4
- C. 8
- D. 1

View Answer

Ans : D

Explanation: Since the #define replaces the string int by the macro char

## 67. What is the output of this program?

```
#include <stdio.h>

#define x 3

int main()
{
 int i;

 i = x*x*x;

 printf("%d", i);

 return 0;
}
```

- A. 27
- B. x is not declared
- C. No output
- D. Garbage value

View Answer

Ans : A

Explanation: Since we replace  $x = 27$  in #define.

## 68. What is the output of this program?

```
#include <stdio.h>

#include <stdlib.h>

#define square(x) x*x

int main()
{
```

```
int i;
i = 27/square(3);
printf("%d",i);
return 0;
}
```

- A. 9
- B. Compilation error
- C. 3
- D. 27

View Answer

Ans : D

Explanation: Operators enjoys priority / is given more priority over \*. In this program the execution takes place in this format.  $27 / \text{square}(3)$   $27 / 3*3$   $27 / 3*3$   $9 * 3$   $27$

69. What is the output of this program?

```
#include <stdio.h>
#define i 5
int main()
{
 #define i 10
 printf("%d",i);
 return 0;
}
```

- A. Compilation error
- B. 10

C. 5

D. Runtime error

View Answer

Ans : B

Explanation: The preprocessor directives can be redefined anywhere in the program. So the most recently assigned value (`#define i 10`) will be taken.

70. What is the output of this program?

```
#include <stdio.h>

#define clrscr() 17

int main()
{
 clrscr();

 printf("%d",clrscr());

 return 0;
}
```

A. Compilation error

B. Runtime error

C. 17

D. none of the above

View Answer

Ans : C

Explanation: Preprocessor in any programming language executes as a separate pass before the execution of the compiler. So textual replacement of `clrscr()` to `17` occurs with no errors.

71. Which of the following are themselves a collection of different data types?

A. String

B. Structures

- C. Char
- D. None of the above

View Answer

Ans : B

Explanation: A structure is a user defined data type in C/C++. A structure creates a data type that can be used to group items of possibly different types into a single type.

72. Which operator connects the structure name to its member name?

- A. -
- B. ->
- C. .
- D. both . and ->

View Answer

Ans : C

73. Which of the following cannot be a structure member?

- A. Function
- B. Array
- C. Structure
- D. None of the above

View Answer

Ans : A

.

74. What is the correct syntax to declare a function foo() which receives an array of structure in function?

- A. void foo(struct \*var);
- B. void foo(struct \*var[]);
- C. void foo(struct var);
- D. none of the mentioned

View Answer

Ans : A

75. Union differs from structure in the following way

- A. All members are used at a time
- B. Only one member can be used at a time
- C. Union cannot have more members
- D. Union initialized all members as structure

View Answer

Ans : B

Explanation: When a variable is associated with a structure, the compiler allocates the memory for each member. The size of structure is greater than or equal to the sum of sizes of its members. The smaller members may end with unused slack bytes. While in case of Union when a variable is associated with a union, the compiler allocates the memory by considering the size of the largest memory. So, size of union is equal to the size of largest member.

76. The size of the following union, where an int occupies 4 bytes of memory is

union demo

```
{
 float x;
 int y;
 char z[10];
};
```

- A. 8 byte
- B. 4 byte
- C. 10 byte
- D. 18 byte

View Answer

Ans : C

Explanation: Largest size among the three structure variable is selected that is char z[10].

77. Members of a union are accessed as\_\_\_\_\_.

- A. union-name.member
- B. union-pointer->member
- C. Both a & b
- D. None of the mentioned

View Answer

Ans : C

78. It is not possible to create an array of pointer to structures.

- A. TRUE
- B. FALSE
- C. May Be
- D. Can't Say

View Answer

Ans : B

Explanation: Making sure of the length has nothing to do with whether you assign or copy. You cannot assign to an array in C, ever. The language doesn't allow it.

79. Which of the following statement is True?

- A. User has to explicitly define the numeric value of enumerations
- B. User has a control over the size of enumeration variables.
- C. Enumeration can have an effect local to the block, if desired
- D. Enumerations have a global effect throughout the file.

View Answer

Ans : C

Explanation: User has a control over the size of enumeration variable

80. size of union is size of the longest element in the union

- A. Yes
- B. No
- C. May Be
- D. Can't Say

View Answer

Ans : A



Explanation: Max size of the union is the size of the largest data type or the memory taken by largest member.

81. What is the similarity between a structure, union and enumeration?

- A. All of them let you define new values
- B. All of them let you define new data types
- C. All of them let you define new pointers
- D. All of them let you define new structures

View Answer

Ans : B

82. Which of the following share a similarity in syntax? 1. Union 2. Structure 3. Arrays 4. Pointers

- A. 3 and 4
- B. 1 and 2
- C. 2 and 3
- D. All of the above

View Answer

Ans : B

83. Size of a union is determined by size of the.

- A. First member in the union
- B. Last member in the union
- C. Biggest member in the union
- D. Sum of the sizes of all members

View Answer

Ans : D

84. Which operator connects the structure name to its member name?

- A. -
- B. .
- C. Both (b) and (c)
- D. None of the above

View Answer

Ans : B

85. How will you free the allocated memory ?

- A. remove(var-name);
- B. free(var-name);
- C. delete(var-name);
- D. dalloc(var-name);

View Answer

Ans : B

86. Which of the following accesses a variable in structure b?

- A. b->var;
- B. b.var;
- C. b-var;
- D. b>var;

View Answer

Ans : B

87. Which of the following accesses a variable in structure \*b?

- A. b->var;
- B. b.var;
- C. b-var;
- D. b>var;

View Answer

Ans : A

88. Which of the following is a properly defined struct?

- A. struct {int a;}
- B. struct a\_struct {int a;}
- C. struct a\_struct int a;
- D. struct a\_struct {int a};

View Answer

Ans : D

89. Which properly declares a variable of struct foo?

- A. struct foo;
- B. struct foo var;
- C. foo;
- D. int foo;

View Answer

Ans : B

90. What is the output of this program?

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

```
struct test {
```

```
 int x = 0;
```

```
 char y = 'A';
```

```
};
```

```
int main()
```

```
{
```

```
 struct test t;
```

```
 printf("%d, %c", s.x, s.y);
```

```
 return 0;
```

}

- A. 0
- B. Error
- C. garbage value garbage value
- D. None of these

View Answer

Ans : B

Explanation: We cannot initialize the members of structure inside the structure declaration.

91) The worst-case occur in linear search algorithm when .....

- A. Item is somewhere in the middle of the array
- B. Item is not in the array at all
- C. Item is the last element in the array
- D. **Item is the last element in the array or item is not there at all**

92) If the number of records to be sorted is small, then ..... sorting can be efficient.

- A. Merge
- B. Heap
- C. **Selection**
- D. Bubble

93) The complexity of the [sorting algorithm](#) measures the ..... as a function of the number n of items to be sorter.

- A. average time
- B. **running time**
- C. average-case complexity
- D. case-complexity

94) Which of the following is not a limitation of binary search algorithm?

- A. must use a sorted array
- B. requirement of sorted array is expensive when a lot of insertion and deletions are needed
- C. there must be a mechanism to access middle element directly
- D. **binary search algorithm is not efficient when the data elements more than 1500.**

95) The Average case occurs in the [linear search algorithm](#) .....

- A. **when the item is somewhere in the middle of the array**
- B. when the item is not the array at all
- C. when the item is the last element in the array
- D. Item is the last element in the array or item is not there at all

96) Binary search algorithm cannot be applied to ...

- A. **sorted linked list**
- B. sorted binary trees
- C. sorted linear array
- D. pointer array

97) Complexity of linear search algorithm is .....

- A.  **$O(n)$**
- B.  $O(\log n)$
- C.  $O(n^2)$
- D.  $O(n \log n)$

98) Sorting algorithm can be characterized as .....

- A. Simple algorithm which require the order of  $n^2$  comparisons to sort  $n$  items.
- B. Sophisticated algorithms that require the  $O(n \log^2 n)$  comparisons to sort items.
- C. **Both of the above**
- D. None of the above

99) The complexity of bubble sort algorithm is .....

- A.  $O(n)$
- B.  $O(\log n)$
- C.  **$O(n^2)$**
- D.  $O(n \log n)$

100) ..... is putting an element in the appropriate place in a sorted list yields a larger sorted order list.

- A. **Insertion**
- B. Extraction
- C. Selection
- D. Distribution