Pointers

1. If ptr is a pointer to int, having value ptr=100. After ptr++, what is the value of ptr?

(a) 100

(b) 101

(c) 102

(d) 103

Answer:
Option **(c)**

2.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 above

Answer:
Option **(c)**

3.A pointer value refers to

(a) A float value

(b) An integer constant

(c) Any valid address in memory

(d) None

Answer:
Option **(c)**

4.Pointer variable is declared using preceding __________ sign

(a) %

(b) &

(c) *

(d) ^

Answer:
Option **(c)**

5.Address stored in the pointer variable is of type _________

(a) Integer

(b) Floating

(c) Hexadecimal

(d) Character

Answer:
Option **(a)**

6.Consider the 32 bit compiler. We need to store address of integer variable to integer pointer. What will be the s

(a) 6 Bytes

(b) 2 Bytes

(c) 4 Bytes

(d) 10 Bytes

Answer:
Option **(b)**

7.In order to fetch the address of the variable we write preceding **_________** sign before variable name.

(a) Percent (%)

(b) Ampersand (&)

(c) Comma (,)

(d) Asterik (*)

Answer:
Option **(b)**

8."&" is called as **___________** in pointer concept

(a) Conditional operator

(b) Logical operator

(c) Address operator

(d) None of these

Answer:
Option **(c)**

9. "*" is called as **__________**

(a) Value at operator

(b) Scope resolution operator

(c) Address operator

(d) None of these

Answer:

Option **(a)**

10. What is the output?

```
void main()
{
    int *pc, c;
    c = 5;
    pc = &c;
    printf("%d", *pc);
}
```

(a) Address of c

(b) 5

(c) Address of pc

(d) Error

Answer:

Option **(b)**

11. What is the output?

```
void main()
{
    int* pc, c;
    c = 5;
    pc = &c;
    c = 1;
    printf("%d, %d", c,*pc);
}
```

(a) 1, 1

(b) 1, 5

(c) 5, 1

(d) Error

Answer:

Option **(a)**

12. What is the output?

```
void main()
{
    int a = 5;
    int *ptr ;
    ptr = &a;
    *ptr = *ptr * 3;
    printf("%d", a);
}
```

(a) Some address

(b) 5

(c) 15

(d) Error

Answer:
Option **(c)**

13. What is the output?

```
void main()
{
    int* pc, c;
    c = 5;
    pc = &c;
    *pc = 1;
    printf("%d, %d", c,*pc);
}
```

(a) 1, 1

(b) 1, 5

(c) 5, 1

(d) Error

Answer:
Option **(a)**

14. What is the output?

```
void main()
{
    int i = 3, *j, k;
    j = &i;
    printf("%d\n", i * *j * i + *j);
}
```

(a) 30

(b) 27

(c) 9

(d) 3

Answer:

Option **(a)**

15. What is an array base address in c language?

(a) Base address is the address of 0th index element

(b) An array b[] base address is &b[0]

(c) An array b[] base address can be printed with printf("%d", b);

(d) All of these

Answer:

Option **(d)**

16. What is meaning of the following statement?
int *ptr[20];

(a) Integer array to integer pointers having size 20

(b) Array of integer pointers of size 20

(c) Integer array of size 20 pointing to an integer pointer

(d) None of these

Answer:

Option **(b)**

17. What is the output?

```
void main()
{
    char str[] = "peace";
    char *s = str;
    printf("%s\n", s+3);
}
```

(a) Peace

(b) eace

(c) ace

(d) ce

Answer:

Option **(b)**

18. What is the output?

```
void main()
{
    int a[3] = {20,30,40};
    printf("%d", *(a+1));
}
```

(a) 20

(b) 30

(c) 40

(d) Compiler error

Answer:
Option **(b)**

19. What is the output?

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

(a) 8 6

(b) 7 6

(c) 6 6

(d) Compiler error

Answer:
Option **(b)**

20. The declaration
int (*p)[5];
means

(a) p is one dimension array of size 5, of pointers to integers

(b) p is a pointer to a 5 elements integer array

(c) Incorrect declaration

(d) None of these

Answer:
Option **(b)**

21. What is the output?

```
void main()
{
    int arr[5] = {1,5,9,13,18};
    int *p = &arr[2];
    int *q = &arr[4];
    printf("%d",*q-*p);
}
```

(a) 8

(b) 9

(c) -8

(d) -9

Answer:
Option **(b)**

22. What is the output?

```
void main()
{
    int arr[5] = {1,5,9,13,18};
    int *p = &arr[1];
    int *q = &arr[4];
    printf("%d",q-p);
}
```

(a) 6

(b) 12

(c) 3

(d) 13

Answer:
Option **(c)**

23. What is the output?

```
void fun(int *ptr)
{
    *ptr = 30;
}
void main()
{
  int y = 20;
  fun(&y);
  printf("%d", y);
}
```

(a) 20

(b) 30

(c) Compiler error

(d) Runtime error

Answer:
Option **(b)**

24. What is the output?

```
void test(int * , int *);
void main()
{
  int a = 5 , b = 6;
  test(&a,&b);
  printf("%d, %d",a,b);
}
void test(int *p, int *q)
{
  *p = *p * *q;
  *q = *p / *q;
  *p = *p / *q;
}
```

(a) 30, 5

(b) 6, 5

(c) 5, 6

(d) None of these

Answer:

Option **(b)**

25. What is the output?

```
void test(int *a, int *b)
{
  a = b;
  *a = 15;
}
int main()
{
  int x = 10, y = 20;
  test(&x, &y);
  printf("%d, %d", x, y);
}
```

(a) 15, 15

(b) 10, 15

(c) 10, 20

(d) 15, 20

Answer:

Option **(b)**

26. Difference between calloc() and malloc()

(a) calloc() takes a single argument while malloc() needs two arguments

(b) malloc() takes a single argument while calloc() needs two arguments

(c) malloc() initializes the allocated memory to ZERO

(d) calloc() initializes the allocated memory to NULL

Answer:
Option **(b)**

27. Which function reallocates memory?

(a) realloc

(b) calloc

(c) malloc

(d) None of these

Answer:
Option **(a)**

28. Which of the following header files must necessarily be included to use dynamic memory allocatior

(a) stdlib.h

(b) stdio.h

(c) memory.h

(d) dos.h

Answer:
Option **(a)**

29. What is correct about malloc() function?

(a) Allocates the memory of requested size.

(b) Returns the pointer to the first byte of allocated space.

(c) Returns the pointer to the first byte of allocated space.

(d) All of these

Answer:
Option **(d)**

30. The number of arguments taken as input which allocating memory dynamically using malloc() is __

(a) 0

(b) 1

(c) 2

(d) 3

Answer:
Option **(b)**

31. Which of the following statement is correct for the malloc() function in C?

(a) int* malloc(int);

(b) char* malloc(char);

(c) unsigned int* malloc(unsigned int);

(d) void* malloc(size_t);

Answer:
Option **(d)**

32. Suppose we have a one-dimensional array, named ‘x’, which contains 10 integers. Which of the foll memory dynamically to the array ‘x’ using malloc()?

(a) x=(int*)malloc(10);

(b) x=(int*)malloc(10,sizeof(int));

(c) x=malloc(int 10,sizeof(int));

(d) x=(int*)malloc(10*sizeof(int));

Answer:
Option **(d)**

33. What is the output?

```
void main()
{
    int *p;
    p = (int *)malloc(20); /* Assume p has address of 1314 */
    printf("%d", p);
}
```

(a) 1314

(b) 1316

(c) NULL

(d) void

Answer:
Option **(a)**

34. What is the output?

```
void main()
{
    int *p;
    p = (int *)malloc(20);
    printf("%d", sizeof(p));
}
```

(a) 4

(b) 2

(c) 8

(d) Garbage value

Answer:
Option **(b)**

35. Which function is used to delete the allocated memory space?

(a) dealloc()

(b) free()

(c) both a and b

(d) delete()

Answer:
Option **(b)**

36. What is the output if it is executed on a 32 bit processor?

```
void main()
{
    int *p;
    p = (int *)malloc(20);
    printf("%d", sizeof(p));
}
```

(a) 2

(b) 4

(c) 8

(d) Garbage value

Answer:
Option **(a)**

37. What is correct about calloc() function?

(a) Allocates the space for elements of an array.

(b) Initializes the elements to zero.

(c) If space is insufficient returns a NULL pointer.

(d) All of these

Answer:
Option **(d)**

38. When the pointer is NULL, then the function realloc is equivalent to the function ________

(a) malloc()

(b) calloc()

(c) free()

(d) alloc()

Answer:
Option **(a)**

39. If malloc() and calloc() are not type casted, the default return type is _____

(a) void*

(b) void**

(c) int*

(d) char*

Answer:
Option **(a)**

40. Which of the following functions allocates multiple blocks of memory, each block of the same size

(a) malloc()

(b) realloc()

(c) calloc()

(d) free()

Answer:
Option **(c)**

41. What if functionality if realloc() function?

(a) Change the location of memory allocated by malloc() or calloc().

(b) Reallocates memory deleted by free() function.

(c) It is used to modify the size of the previously allocated memory space.

(d) None of these

Answer:
Option **(c)**

42. What is the output?

```
void main()
{
    char *p = calloc(100, 1);
    p = "welcome";
    printf("%s", p);
}
```

(a) Address of p

(b) welcome

(c) Garbage value

(d) Error

Answer:
Option **(b)**

43. What is the output?

```
void main()
{
    int *ptr;
    ptr = (int *)calloc(1,sizeof(int));
    *ptr = 10;
    printf("%d\n",*ptr);
}
```

(a) 0

(b) -1

(c) 10

(d) NULL

Answer:
Option **(c)**

44. What is the output?

```
void main()
{
    int *ptr;
    ptr = (int *)calloc(1,sizeof(int));
    printf("%d\n",*ptr);
}
```

(a) 0

(b) -1

(c) Error

(d) Null

Answer:Option **(a)**

45. When fopen() fails to open a file it returns

(a) NULL

(b) 1

(c) -1

(d) None of above

Answer:
Option **(a)**

46. File manipulation functions in C are available in which header file?

(a) streams.h

(b) stdio.h

(c) stdlib.h

(d) files.h

Answer:
Option **(b)**

47. Which of the following true about FILE *fp

(a) FILE is a keyword in C for representing files and fp is a variable of FILE type.

(b) FILE is a structure and fp is a pointer to the structure of FILE type

(c) FILE is a stream

(d) FILE is a buffered stream

Answer:
Option **(b)**

48. Which of the following file open mode argument is used to truncate?

(a) a

(b) w

(c) r

(d) t

Answer:
Option **(b)**

49. The first and second arguments of fopen() are

(a) A character string containing the name of the file & the second argument is the mode.

(b) A character string containing the name of the user & the second argument is the mode.

(c) A character string containing file pointer & the second argument is the mode.

(d) None of these

Answer:
Option **(a)**

50. Which one of the following is correct syntax for opening a file.

(a) FILE *fopen(const *filename, const char *mode)

(b) FILE *fopen(const *filename)

(c) FILE *open(const *filename, const char *mode)

(d) FILE open(const*filename)

Answer:
Option **(a)**

51. What is the function of the mode ‘ w+’?

(a) Create text file for writing, discard previous contents if any

(b) Create text file for update, discard previous contents if any

(c) Create text file for writing, do not discard previous contents if any

(d) Create text file for update, do not discard previous contents if any

Answer:
Option **(b)**

52. If the mode includes 'b' after the initial letter, what does it indicates?

(a) text file

(b) big text file

(c) binary file

(d) bit file

Answer:
Option **(c)**

53getc() returns EOF when

. (a) end of files is reached

(b) When getc() fails to read a character

(c) Both A and B

(d) None of these

Answer:
Option **(c)**

54A data of the file is stored in___

- (a) RAM

(b) ROM

(c) Hard disk

(d) None of these

Answer:
Option **(c)**

55. Select a function which is used to write a string to a file______

(a) pits()

(b) putc()

(c) fputs()

(d) fgets()

Answer:
Option **(c)**

56. fflush(NULL) flushes all ________

(a) input streams

(b) output streams

(c) previous contents

(d) appended text

Answer:
Option **(b)**

57. Choose the right statement for fscanf() and scanf()

(a) fscanf() can read from standard input whereas scanf() specifies a stream from which to re

(b) fscanf() can specifies a stream from which to read whereas scanf() can read only from sta

(c) fscanf() and scanf() has no difference in their functions

(d) fscanf() and scanf() can read from specified stream

Answer:
Option **(b)**

58. What does the following C statement mean?
char *gets(char *s)

(a) Reads the next input line into the array s.

(b) Writes the line into the array s.

(c) Reads the next input character into the array s.

(d) Write a character into the array.

Answer:
Option **(a)**

59. Which function will return the current file position for stream?

(a) fgetpos()

(b) fseek()

(c) ftell()

(d) fsetpos()

Answer:
Option **(c)**

60. Choose a correct statement about C file mode "a".
FILE *fp;
fp=fopen("abc.txt","a");

(a) "a" is for append operation. You can append or add new content to the existing contents.

(b) If file is not found, new file is created.

(c) You cannot write read file contents.

(d) All of these

Answer:
Option **(d)**

61. What is the C function used to move current pointer to the beginning of file?

(a) rev()

(b) rewind()

(c) rew()

(d) begin()

Answer:
Option **(b)**

62.Difference between calloc() and malloc()

a) calloc() takes a single argument while malloc() needs two argur
b) malloc() takes a single argument while calloc() needs two argur
c) malloc() initializes the allocated memory to ZERO
d) calloc() initializes the allocated memory to NULL

63. Which function reallocates memory?
(a) realloc
(b) calloc
(c) malloc
(d) None of these

64. Which function should be used to release allocated memory wh
(a) dealloc
(b) free()
(c) release()

(d) unalloc()

65. File manipulation functions in C are available in which header f
(a) streams.h
(b) stdio.h
(c) stdlib.h
(d) files.h

66. When fopen() fails to open a file it returns
(a) NULL
(b) 1
(c) -1
(d) None of above

67. Which function is used to put the file pointer at the desired loca
(a) fseek()
(b) rewind()
(c) ftell()
(d) fptr()

68. What is the return type of malloc() or calloc()?

A. int *
B. int **
C. void *
D. void **

View Answer

Ans : C

Explanation: malloc() and calloc() return void *, without void * we may get warning
type cast the return type to appropriate pointer.

69. Which function is used to delete the allocated memory space

A. Dealloc()
B. free()
C. Both A and B
D. None of the above

View Answer

Ans : B

Explanation: free() is used to free the memory spaces allocated by malloc() and ca

70. Among 4 header files, which should be included to use the m allocation functions like malloc(), calloc(), realloc() and free()?

A. #include<string.h>
B. #include<stdlib.h>
C. #include<memory.h>
D. Both b and c

View Answer

Ans : B

Explanation: #include <stdlib.h> is a header filer, which contains the inbuilt functio memory allocation functions.

71. Which of the following is/are true

A. calloc() allocates the memory and also initializes the allocates mem while memory allocated using malloc() has random data.
B. malloc() and memset() can be used to get the same effect as calloc
C. Both malloc() and calloc() return 'void *' pointer
D. All of the above

View Answer
Ans : D

72. Which of the following is true?

A. "ptr = calloc(m, n)" is equivalent to following
B. r = malloc(m * n);
C. "ptr = calloc(m, n)" is equivalent to following
D. r = malloc(m * n); memset(ptr, 0, m * n);

View Answer
Ans : B

Explanation: The name malloc and calloc() are library functions that allocate mem It means that memory is allocated during runtime(execution of the program) from

73. Which languages necessarily need heap allocation in the run environment?

A. Those that support recursion

B. Those that use dynamic scoping
C. Those that use global variables
D. Those that allow dynamic data structures

View Answer

Ans : D

Explanation: Heap allocation is needed for dynamic data structures like tree, linke

74. Which of the following statement is correct prototype of the function in c ?

A. int* malloc(int);
B. Char* malloc(char);
C. unsigned int* malloc(unsigned int);
D. void* malloc(size_t);

View Answer

Ans : D

Explanation: By defalut for malloc() function return type is void.

75. Specify the 2 library functions to dynamically allocate memo

A. malloc() and memalloc()
B. alloc() and memalloc()
C. malloc() and calloc()
D. memalloc() and faralloc()

View Answer

Ans : C

Explanation: 2 library functions to dynamically allocate memory is malloc() and ca

76. malloc() returns a float pointer if memory is allocated for sto and a double pointer if memory is allocated for storing double's.

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

View Answer
Ans : B

Explanation: malloc() and calloc() return void pointer for using a particular data typ explicite type casting.

77. malloc() allocates memory from the heap and not from the st

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

View Answer
Ans : A

Explanation: Heap area consist of hash codes .i.e. addreses while stack may or m why malloc() allocates memory from the heap.

78. Which of the following true about FILE *fp

A. FILE is a keyword in C for representing files and fp is a variable of F
B. FILE is a stream
C. FILE is a buffered stream
D. FILE is a structure and fp is a pointer to the structure of FILE type

View Answer

Ans : D

Explanation: fp is a pointer of FILE type and FILE is a structure that store followin
about opened file.

79. Which of the following mode argument is used to truncate?

A. a
B. w
C. f
D. t

View Answer

Ans : B

80. The first and second arguments of fopen() are

A. A character string containing the name of the file & the second argu
mode
B. A character string containing the name of the user & the second arg
mode

C. A character string containing file pointer & the second argument is the mode
D. None of the mentioned

View Answer

Ans : A

.

81. FILE is of type ______

A. int type
B. char * type
C. struct type
D. None of the mentioned
View Answer

82. fseek() should be preferred over rewind() mainly because

A. rewind() doesn't work for empty files
B. rewind() may fail for large files
C. In rewind, there is no way to check if the operations completed suc
D. All of the above
View Answer
Ans : C

Explanation: The rewind function sets the file position indicator for the stream poir to the beginning of the file.

83. FILE reserved word is?

A. A structure tag declared in stdio.h
B. One of the basic datatypes in c
C. Pointer to the structure defined in stdio.h
D. It is a type name defined in stdio.h
View Answer

84. For binary files, a ___ must be appended to the mode string.

A. "b"
B. "B"
C. "binary"

D. "01"

View Answer

Ans : A

85. Which of the following statements about stdout and stderr a

A. Same
B. Both connected to screen always.
C. Both connected to screen by default.
D. stdout is line buffered but stderr is unbuffered.

View Answer

Ans : C

86. Which type of files canâ€™t be opened using fopen()?

A. .txt
B. .bin
C. .c
D. None of the above

View Answer

Ans : D

87. When a C program is started, O.S environment is responsible file and providing pointer for that file?

A. Standard input
B. Standard output
C. Standard error
D. All of the above

View Answer
Ans : D

88. If there is any error while opening a file, fopen will return?

A. Nothing
B. EOF
C. NULL
D. Depends on compiler

View Answer
Ans : C

89. It is not possible to combine two or more file opening mode i
method.

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

View Answer
Ans : B

90. What is the return value of putchar()?

A. The character written
B. EOF if an error occurs
C. Nothing
D. Both character written & EOF if an error occurs

View Answer

Ans : D

91. Which is true?

A. The symbolic constant EOF is defined in
B. The value is -1
C. The symbolic constant EOF is defined in & value is -1
D. Only value is -1

View Answer

Ans : C

92. What is the purpose of "rb" in fopen() function used below ir FILE *fp; fp = fopen("demo.txt", "rb");

A. Open "demo.txt" in binary mode for reading
B. Create a new file "demo.txt" for reading and writing
C. Open "demo.txt" in binary mode for reading and writing
D. None of the above

View Answer

Ans : A

Explanation: The file demo.txt will be opened in the binary mode.

93. Which files will get closed through the fclose() in the followin

```
void main()

{

       FILE *fp, *ft;

       fp = fopen("a.txt", "r");

       ft = fopen("b.txt", "r");

       fclose(fp,ft);

}
```

A. a, b
B. a
C. b
D. Error in fclose
View Answer
Ans : D

Explanation: Error occurs due to extra parameter in call to fclose().

94. When fopen() is not able to open a file, it returns

A. EOF
B. NULL
C. Run-time Error
D. None of the above
View Answer
Ans : B

Explanation: fopen() returns NULL if it is not able to open the file

95. getc() returns EOF when

A. When getc() fail to read the character
B. When end of file is reached
C. Both A and B
D. None of the above

View Answer

Ans : C

96. What is the output of this program?

```
#include <stdio.h>

int main(){

    FILE *fp;

    char *str;

    fp=fopen("demo.txt","r");// demo.txt :you are a good programmer

    while(fgets(str,6,fp)!=NULL)

    puts(str);

    fclose(fp);

    return 0;

}
```

A. you are a good programmer

B. e a good programmer
C. you ar
D. you are

View Answer

Ans : B

Explanation: It will print only six five character

97. What is the output of this program?

```
#include <stdio.h>

int main(){

    char c;

    FILE *fp;

    fp=fopen("demo.txt","r");

    while((c=fgetc(fp))!=EOF)

         printf("%c",c);

    fclose(fp);

    return 0;

}
```

A. It will print the content of file demo.txt
B. It will print the content of file till it encouter new line character
C. Compilation Error
D. None of the above

View Answer

Ans : A

98. What is the output of this program?

```
#include <stdio.h>

int main(){

    char c;

    FILE *fp;

    fp=fopen("demo.txt","a+"); // demo.txt : hello you are reading a file

    fprintf(fp," demo");

       fclose(fp);

    fp=fopen("myfile.txt","r");


    while((c=fgetc(fp))!=EOF)

         printf("%c",c);

    fclose(fp);

    return 0;

}
```

A. hello you are reading a file
B. hello you are reading a file demo
C. demo
D. None of the above

View Answer

Ans : B

Explanation: Mode a+ means we can read and write on file but when we will write
append at the end content and it doesnâ€™t truncate the content of file.

99. A data of the file is stored in â€¦

A. Ram
B. Hard disk
C. Rom
D. None

View Answer

Ans : B

Explanation: A data of the file is stored in Hard disk.

100. Select a function which is used to write a string to a fileâ€¦

A. pits()
B. putc()
C. fputs()
D. fgets()

View Answer

Ans : C

Explanation: fputs() is a function which is used to write a string to a file