OMR Answer Sheet No.

Question Booklet Number

24/2337

B.C.A. (Second Semester) Examination, 2024

Booklet Code
D

C-Programming

Paper - I (Major)

(निम्न पूर्तियाँ परीक्षार्थी स्वयं भरें / To be filled in by the Candidate)

अनुक्रमांक (अंकों में)
Roll No. (in figures)

[समय : 2 : 00 घण्टे
[Time : 2 : 00 Hours

[अधिकतम अंक : 75
[Maximum Marks : 75

अनुक्रमांक (शब्दों में)
Roll No. (in words)

Enrolment No. (in figures)

कॉलेज का नाम
Name of College

कक्ष निरीक्षक के हस्ताक्षर
Signature of Invigilator

परीक्षार्थियों के लिए निर्देश :

1. प्रश्न-पुस्तिका को तब तक न खोलें जब तक आपसे कहा न जाए।
2. इस प्रश्न-पुस्तिका में कुल 75 प्रश्न हैं। परीक्षार्थियों को सभी प्रश्न हल करना अनिवार्य है। दिये गये OMR उत्तर-पत्रक पर ही सभी प्रश्न हल करना है। सभी प्रश्नों के अंक समान हैं।
3. प्रश्नों के उत्तर अंकित करने से पूर्व प्रश्न-पुस्तिका तथा OMR उत्तर-पत्रक को सावधानीपूर्वक देख लें। दोषपूर्ण प्रश्न-पुस्तिका, जिसमें कुछ भाग छपने से छूट गये हों या प्रश्न एक से अधिक बार छप गये हों या किसी भी प्रकार की कमी हो, उसे तुरन्त बदल लें।

(शेष निर्देश अन्तिम पृष्ठ पर)

Instructions to the Examinee :

1. Do not open the booklet unless you are asked to do so.
2. This booklet contains 75 questions. Examinee have to attempt all questions. All questions attempt on the given OMR Answer Sheet. All questions carry equal marks.
3. Examine the Booklet and the OMR Answer-Sheet very carefully before you proceed. Faulty question booklet due to missing or duplicate pages/questions or having any other discrepancy should be immediately replaced.

(Remaining Instructions on last page)

1. How do you declare a pointer in C?

(1) datatype *pointerName;

(2) *dataType*pointerName;

(3) dataTypepointerName*;

(4) pointer dataType* pointerName;

2. How can you increment the value pointed to by a pointer in C?

(1) (*ptr)++;

(2) *ptr++;

(3) ++*ptr;

(4) Both (1) and (3)

3. What is the correct way to declare a pointer to a pointer in C?

(1) int **ptr;

(2) int *ptr*;

(3) int &ptr;

(4) int ptr**;

4. What is a NULL pointer in C?

(1) A pointer that points to the number 0

(2) A pointer that has an invalid address

(3) A special pointer value representing an empty or uninitialized pointer

(4) A pointer to a void type

5. How do you dynamically allocate memory in C?

(1) Using the alloc() function

(2) Using the new operator

(3) Using the malloc() function

(4) Using the create () function

6. What is pointer arithmetic in C?

(1) Adding, subtracting, and comparing pointers

(2) Multiplying and dividing pointers

(3) Changing the address a pointer points to

(4) Performing arithmetic operations on the values pointed by pointers

7. What is the result of comparing two pointers in C?

(1) The difference in their memory addresses

(2) True or false, depending on whether they point to the same memory location

(3) The sum of their memory addresses

(4) The result is undefined

8. Which of the following is a correct way to pass a pointer to a function in C?

(1) Passing the address of the pointer

(2) Passing the pointer directly

(3) Both (1) and (2)

(4) Neither (1) nor (2)

9. Can a function return a pointer in C?

(1) Yes

(2) No

(3) Only if it is a void pointer

(4) Only if it points to a static variable

10. What is the purpose of the const keyword with pointers in C?

(1) To make the pointer itself constant

(2) To make the value pointed to by the pointer constant

(3) Both (1) and (2)

(4) Neither (1) nor (2)

11. How do you free dynamically allocated memory in C?

(1) Using the free() function

(2) Using the dealloc() function

(3) The memory is automatically freed

(4) Using the delete operator

12. The #include <stdio.h> is a _____

(1) Inclusion directive

(2) File inclusion directive

(3) Preprocessor directive

(4) None of the above

13. Which of these properties of #define is false?

(1) These always obey the scope rules

(2) We can make use of a pointer of #define

(3) The #define can be externally available

(4) All of the above

14. The correct format of declaring a function is:

(1) type_of_returnname_of_function (argument type);

(2) type_of_returnname_of_function (argument type){}

(3) type_of_return (argument type) name_of_function;

(4) All of the above

15. We can determine the size of a union with the help of the size of _____

(1) The sum of all the members' sizes

(2) The biggest member of the union

(3) The last member of the union

(4) The first member of the union

16. What is the primary purpose of the preprocessor directive #error?

(1) Rectifies the first error occuring in the code

(2) Rectifieds the errors present in a code

(3) Causes a preprocessor to ignore any error

(4) Causes a preprocessor to report some fatal error

17. Preprocessor Directives are used for-

(1) Macro Expansion

(2) File Inclusion

(3) Conditional compilation

(4) All of these

18. Which of the following operation is illegal in structures?

(1) Typecasting of structure

(2) Pointer to a variable of the same structure

(3) Dynamic allocation of memory for structure

(4) All of the mentioned

19. Presence of code like "s.t.b=10" indicates _____

(1) Syntax Error

(2) Structure

(3) Double data type

(4) An ordinary variable name

20. What is the purpose of the 'typedef' keyword in C?

(1) It is used to create a new data type.

(2) It is used to declare a variable

(3) It is used to define a function

(4) It is used to include header files

21. In C, what is the purpose of the #include directive?

(1) It is used to declare a function

(2) It is used to define a macro

(3) It is used to include a header file in the program

(4) It is used to declare a structure

22. Which operator is used to access the members of a structure in C?

(1) . (dot)

(2) -> (arrow)

(3) , (comma)

(4) :: (scope resolution)

23. In C, which function is used to close a file?

(1) close()

(2) fclose()

(3) file_close()

(4) endfile()

24. Which header file is needed to use dynamic memory allocation functions like 'malloc' and 'free' in C?

(1) <stdlib.h>

(2) <memory.h>

(3) <malloc.h>

(4) <stdio.h>

25. What does the '#ifdef' preprocessor directive check for in C?

(1) It checks if a variable is defined

(2) It checks if a variable is undefined

(3) It checks if a function is defined

(4) It checks if a variable is negative

26. In C, what does the '<<' operator represent in the context of bitwise operations?

(1) Logical OR

(2) Logical AND

(3) Bitwise left shift

(4) Bitwise right shift

27. What is the purpose of the 'union' data type in C?

(1) It is used to declare arrays

(2) It is used to group together variables of different data types.

(3) It is used to create linked lists

(4) It is used to define constant values

28. Which library should be included to use the 'sqrt' function for calculating the square root in C?

(1) <math.h>

(2) <cmath.h>

(3) <stdio.h>

(4) <stdlib.h>

29. Which header file is required to work with file I/O in C?

(1) <io.h>

(2) <fileio.h>

(3) <stdio.h>

(4) <inputoutput.h>

30. In C, which operator is used for bitwise OR?

(1) | (pipe)

(2) |& (pipe-ampersand)

(3) |* (pipe-asterisk)

(4) || (logical OR)

31. What does the '#define' directive do in C?

(1) It declares a function

(2) It defines a constant or macro

(3) It declares a variable

(4) It is used to include header files

32. Which standard C library function is used for character input from a file pointer?

(1) fgetc()

(2) fgets()

(3) getchar()

(4) scanf()

33. What are the types of data allowed inside a structure?

(1) int, float, double, long double

(2) char, enum, union

(3) Pointers and Same structure type members

(4) All the above

34. What is actually passed if you pass a structure variable to a function?

(1) Copy of structure variable

(2) Reference of structure variable

(3) Starting address of structure variable

(4) Ending address of structure variable

35. Which of the following uses structure?

(1) Array of structures

(2) Linked lists

(3) Binary Tree

(4) All of the mentioned

36. Which among the following is never possible in C when members in a structure are same as that in a union?

//Let P be a structure

// Let Q be a union

(1) sizeof(P) is greater than sizeof(Q)

(2) sizeof(P) is equal to sizeof(Q)

(3) sizeof(P) is less than to sizeof(Q)

(4) None of the above

37. How do you check if a file was opened successfully in C?

(1) Use the 'filestatus' variable

(2) Check the return value of fopen()

(3) Use the filleopen function

(4) Check the file's size

38. How do you declare an array of 10 integers in C?

(1) int[10] array;

(2) int array[10];

(3) array int[10];

(4) None of the above

39. An array of similar data types which themselves are a collection of dissimilar data type are _____

(1) Linked lists

(2) Trees

(3) Array of Structure

(4) All of the mentioned

40. Comment on an array of the void data type

(1) It can store any data-type

(2) It only stores element of similar data type to first element

(3) It acquires the data type with the highest precision in it

(4) You cannot have an array of void data types

41. Array index starts at

(1) 1

(2) User Defined

(3) 0

(4) None of above

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

(1) '\0'

(2) NULL

(3) Both (1) & (2)

(4) None of above

43. Which header file in necessary for strlen() function?

(1) conio.h

(2) strings.h

(3) string.h

(4) stdio.h

44. Assuming int is of 4 bytes, what is the size of int arr[15];?

(1) 30

(2) 15

(3) 4

(4) 60

45. What is the output?

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

(1) 5

(2) 6

(3) 8

(4) None of these

46. 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]);
}
```

(1) 1, 5

(2) 0, 0

(3) 2, 6

(4) Compiler error

47. 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++;
    }
}
```

(1) 20 12 14

(2) 10 20 14

(3) 10 12 20

(4) Compiler error

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

(1) char name[6]={"I", "N", "D", "I", "A"}

(2) char name[6]={'I', 'N', 'D', 'I', 'A','\0'}

(3) char name[6]={'I', 'N', 'D', 'I', 'A'}

(4) None of these

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

(1) Compiler error is thrown

(2) 1 value will be returned

(3) 0 value will be returned

(4) Some garbage value will be returned

50. Which of the following is a two-dimensional array?

(1) array anarray [20][20];

(2) int anarray [20][20];

(3) int array [20, 20];

(4) char array [20];

51. If the two strings are identical, then strcmp() function returns

(1) -1

(2) 1

(3) 0

(4) True

52. Which function will you choose to merge two words?

(1) strcpy()

(2) strjoin()

(3) strcat()

(4) strmerge()

53. How to store an Array element in memory location?

(1) Stord Randomly

(2) Store sequentially

(3) Both ways

(4) None of the above

54. Which is the non-primitive data structure?

(1) Integer

(2) Character

(3) Arrays

(4) None of the above

55. In two-dimensional arrays, by default values are stored in

(1) Column major order

(2) Row major order

(3) Random order

(4) None of the above

56. Find the number of elements in the following array.

char si []="India is great";

(1) 3

(2) 5

(3) 15

(4) 12

57. What does the following declaration mean?

int (*ptr)[10];

(1) ptr is array of pointers to 10 integers

(2) ptr is a pointer to an array of 10 integers

(3) ptr is an array of 10 integers

(4) ptr is an pointer to array

58. In C, if you pass an array as an argument to a function, what actually gets passed?

(1) Value of elements in array

(2) First element of the array

(3) Base address of the array

(4) Address of the last element of array

59. If array is initialized where it is declared, then mentioning _____ of array is optional.

(1) Data type

(2) Dimension

(3) Name

(4) Data type and Dimension

60. An array can be passed to a function by _____ https://www.mgkvponline.com

(1) Call by reference

(2) Call by value

(3) Call by reference by passing base address to a function

(4) Both (1) and (3)

61. What will be output of the following program

```
int main()
{
    int arr[4]={3, 4, 5, 6};
    int k[4];
    k=arr;
    printf("%d\n", k[1]);
}
```

(1) Compile Time Error

(2) 4

(3) No output

(4) Program crashes

62. What will strcmp() function do?

(1) Compares the first n characters of the object

(2) Undefined function

(3) Copies the string

(4) Compares the string

63. What is a String in C language?

(1) String is a new Data Type in C

(2) String is an array of characters with null character as the last elements of array

(3) String is an array of characters with null character as the first element of array

(4) String is an array of integers with 0 as the last element of array

64. Can you combine the following two statements into one?

```
char*p;
p=(char*)malloc(100);
```

(1) char p=*malloc(100);

(2) char *p=(char) malloc(100);

(3) char *p=(char*)malloc(100);

(4) char *p=(char *) (malloc*) (100);

65. In which header file is the NULL macro defined?

(1) stdio.h

(2) stddef.h

(3) stdio.h and stddef.h

(4) math.h

66. If a variable is a pointer to a structure, then which of the following operator is used to access data members of the structure through the pointer variable?

(1) .

(2) &

(3) *D.->

(4) None of these

67. A pointer is

(1) A keyword used to create variables

(2) A variable that stores address of an instruction

(3) A variable that stores address of other variable

(4) All of the above

68. The parameter passing mechanism for an array is

(1) call by value

(2) call by value-result

(3) call by reference

(4) None of these

69. The operator used to get value at address stored in a pointer variable is

(1) *

(2) &

(3) &&

(4) ||

P.T.O.

70. How will you free the allocated memory?

(1) remove (var-name);

(2) free(var-name);

(3) delete(var-name);

(4) dalloc(var-name);

71. What does the following declaration mean?

int (*ptr)[10];

ptr is array of pointers to 10 integers

(1) ptr is a pointer to an array of 10 integers

(2) ptr is an array of 10 integers

(3) ptr is an pointer to array

(4) None of these

72. A pointer value refers to

(1) A float value

(2) An integer constant

(3) Any valid address in memory

(4) None

73. & " is called as _____ in pointer concept

(1) Conditional operator

(2) Logical operator

(3) Address operator

(4) None of these

74. "*" is called as _____

(1) Value at operator

(2) Scope resolution operator

(3) Address operator

(4) None of these

75. What is the output?

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

(1) Address of c

(2) 5

(3) Address of pc

(4) Error