OMR Answer Sheet No.

Question Booklet Number

23/3192

B.C.A. Second Semester Examination, 2023

C-Programming

Booklet Code
A

Paper : First

(Major)

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

| समय : 2 : 00 घण्टे
| Time : 2 : 00 Hours

| अधिकतम अंक : 75
| Maximum Marks : 75

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

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 एवं के अतिरिक्त और 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. What is the maximum number of dimensions an array in C may have?
   (1) Two
   (2) Eight
   (3) Sixteen
   (4) Theoretically no limit. The only practical limits are memory size and compilers

2. A one dimensional array A has indices 1.....75. Each element is a string and takes up three memory words. The array is stored at location 1120 decimal. The starting address or A[49] is:
   (1) 1264
   (2) 1164
   (3) 1167
   (4) 1267

3. Array can be considered as set of elements stored in consecutive memory locations but having _____.
   (1) Same data type
   (2) Different data type
   (3) Same scope
   (4) None of these

4. Array is an example of ____ type memory allocation.
   (1) Compile time
   (2) Run time
   (3) Both (1) and (2)
   (4) None of the above

5. Size of the array need not be specified, when:
   (1) Initialization is a part of definition
   (2) It is a formal parameter
   (3) It is a declaration
   (4) All of the above

6. Length of the string "letsfindcourse" is
   (1) 13
   (2) 14
   (3) 15
   (4) 12

7. How will you print on the screen?
   (1) Printf(" ");
   (2) Printf(' ');
   (3) Printf("\n");
   (4) Printf("" ")

8. If the two strings are identical, then strcmp() function returns
   (1) -1
   (2) 1
   (3) 0
   (4) None

9. Which of the following function sets first n characters of a string to a given character?

(1) strset()

(2) strnset()

(3) strcset()

(4) strinit()

10. An array elements are always stored in _____ memory locations.

(1) Sequential

(2) Random

(3) Sequential and Random

(4) None of the above

11. What is the output of this program?

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

(1) 5

(2) 6

(3) 0

(4) Garbage Value

12. What is the output of this program?

```
void main()
{
intarr[10];
printf("%d %d", arr[-2], arr[11]);
}
```

(1) 0 0

(2) Garbage value 0

(3) Garbage value Garbage value

(4) Compilation Error

13. What is the output of this program?

```
#include<stdio.h>
#include<string.h>
void main()
{
chars1[20]="Hello",s2[10]=" World";
printf("%s", strcpy(s2,
strcat(s1,s2)));
}
```

(1) Hello World

(2) HelloWorld

(3) Hello

(4) World

14. What is the highest index for an array with 10 elements in C?

(1) 5

(2) 9

(3) 10

(4) 11

15. Which keyword is used to declare a character array in C?

(1) str

(2) character

(3) arr

(4) char

16. Which type of loop is commonly used to iterate through an array in C?

(1) if loop

(2) switch loop

(3) for loop

(4) while loop

17. Which function is used to find the length of a string in C?

(1) lenstr

(2) strsize

(3) strlength

(4) stringlen

18. A pointer is

(1) A variable that stores address of an instruction

(2) A variable that stores address of other variable

(3) A keyword used to create variables

(4) None of these

19. The reason for using pointers in a C program is

(1) Pointers allow different functions to share and modify their local variables.

(2) To pass large structures so that complete copy of the structure can be avoided.

(3) Pointers enable complex "linked" data structures like linked lists and binary trees.

(4) All of the above

20. What is wild pointer?

(1) Pointer which is wild in nature

(2) Pointer which has no value

(3) Pointer which is not initialized

(4) None

21. Address stored in the pointer variable is of type _____

(1) Integer

(2) Float

(3) Array

(4) Character

22. In order to fetch the address of the variable we write preceding ___ sign before variable name.

(1) Percent (%)

(2) Comma (,)

(3) Ampersand (&)

(4) Asterix (*)

23. Comment on this

const int *ptr;

(1) You cannot change the value pointed by ptr

(2) You cannot change the pointer ptr itself

(3) Both (1) and (2)

(4) You can change the pointer as well as the value pointed by it

24. Choose the best alternative- prior to using a pointer variable

(1) It should be declared

(2) It should be initialized

(3) It should be both declared and initialized

(4) None of the above

25. Which of the following statements are correct about the given program?

```
#include <stdio.h>
int main()
{
printf("%p", main());
return 0;
}
```

(1) Prints garbage value Infinite times

(2) Error

(3) Runs Infinite times without printing anything

(4) None of the above

26. What does the following statement mean?

int (*ptr)[5];

(1) ptr is an array of 5 integers

(2) ptr is a pointer to an array of 5 integers

(3) ptr is array to pointers to 5 integers

(4) ptr is an pointer to array

27. Is there any difference between the following two statements?

char *p=0;

char *t=NULL;

(1) Yes

(2) No

(3) May Be

(4) Can't Say

28. What is a preprocessor?

(1) That processes its input data to produce output that is used as input to another program

(2) That is nothing but a loader

(3) That links various source files

(4) All of the mentioned

29. Which of the following are C preprocessors?

(1) #ifdef

(2) #define

(3) #endif

(4) All of the mentioned

30. Property which allows producing different executable programs for different platforms in C is called?

(1) File inclusion

(2) Selective inclusion

(3) Conditional compilation

(4) Recursive macros

31. What is #include<stdio.h>?

(1) Preprocessors directive

(2) Inclusion directive

(3) File inclusion directive

(4) None of the mentioned

32. C preprocessors can have compiler specific features.

(1) True

(2) False

(3) Depends on the standard

(4) Depends on the platform

33. C preprocessor is conceptually the first step during compilation:

(1) True

(2) False

(3) Depends on the compiler

(4) Depends on the standard

34. Preprocessor feature that supply line numbers and filenames to compiler is called?

(1) Selective inclusion

(2) Macro substitution

(3) Concatenation

(4) Line control

35. #include<somefile.h> are _____ files and #include "somefile.h" _____files.

(1) Library, Library

(2) Library, user-created header

(3) User-created header, library

(4) They an include all types of file

36. The C-preprocessors are specified with _____ symbol.

(1) #

(2) $

(3) ""

(4) &

37. Which of the following true about FILE *fp?

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

(2) FILE is a stream

(3) FILE is a buffered stream

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

38. The first and second arguments of fopen() are:

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

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

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

(4) None of the mentioned

39. FILE is of type _____.

(1) int type

(2) char *type

(3) struct type

(4) None of the mentioned

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

(1) rewind() doesn't work for empty files

(2) rewind() may fail for large files

(3) In rewind, there is no way to check if the operations completed successfully

(4) All of the above

41. FILE reserved word is?

(1) A structure tag declared in stdio.h

(2) One of the basic datatypes in C

(3) Pointer to the structure defined in stdio.h

(4) It is a type name defined in stdio.h

42. For binary files, a ____ must be appended to the mode string.

(1) "b"

(2) "B"

(3) "binary"

(4) "01"

43. Which of the following statements about stdout and stderr are true?

(1) Same

(2) Both connected to screen always.

(3) Both connected to screen by default.

(4) stdout is line buffered but stderr is unbuffered.

44. Which type of files can't be opened using fopen()?

(1) .txt

(2) .bin

(3) .c

(4) None of the above

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

(1) Standard input

(2) Standard output

(3) Standard error

(4) All of the above

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

(1) Nothing

(2) EOF

(3) NULL

(4) Depends on compiler

47. It is not possible to combine two or more file opening mode in open () method:

(1) True

(2) False

(3) May be

(4) Can't say

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

(1) The character written

(2) EOF if an error occurs

(3) Nothing

(4) Both character written & EOF if an error occurs

49. Which is true?

(1) The symbolic constant EOF is defined in<stdio.h>

(2) The value is -1

(3) The symbolic constant EOF is defined in<stdio.h> & value is -1

(4) Only value is -1

50. Which files will get closed through the fclose() in the following program?

```
Void main ( )
{ FILE *fp, *ft;
fp=fopen("a.txt","r");
ft=fopen("b.txt","r");
fclose(fp,ft);
}
```

(1) a,b

(2) a

(3) b

(4) Error in fclose

51. getc() returns EOF when

(1) When getc() fails to read the character

(2) When end of file is reached

(3) Both (1) and (2)

(4) None of the above

52. 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;
}
```

(1) you are a good programmer
(2) e a good programmer
(3) you ar
(4) you are

53. What is the output of this program?

```
#inclued<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;
}
```

(1) It will print the content of file demo.txt
(2) It will print the content of file till it encounter new line character
(3) Compilation Error
(4) None of the above

54. Data related to the file is stored in?

(1) Ram
(2) Hard disk
(3) Rom
(4) None

55. Select a function which is used to write a string to a file?

(1) pits()
(2) putc()
(3) fputs()
(4) fgets()

56. Data is stored in a text file in

(1) ASC11 code
(2) Binary code
(3) Octal code
(4) Text code

57. Offset used in fseek() function call can be negative number

(1) True
(2) False
(3) May Be
(4) Can't Say

58. stderr, stdin, stdout are FILE pointers:

(1) Yes

(2) No

(3) May Be

(4) Can't Say

59. The data type of file pointer is?

(1) int

(2) double

(3) void

(4) file

60. A file written in text mode can be read back in binary mode:

(1) Yes

(2) No

(3) May Be

(4) Can't Say

61. A text stream is an ordered sequence of characters composed into lines, each line consisting of zero or more characters plus a terminating new-line character:

(1) True

(2) False

(3) May Be

(4) Can't Say

62. What does the following segment of code do? fprintf(fp,"Copying!");

(1) It writes "Copying!" into the file pointed by fp

(2) It reads "Copying!" from the file and prints on display

(3) It writes as well as reads "Copying!" to and from the file and prints it

(4) None of the mentioned

63. Which of these is not a bitwise operator?

(1) &

(2) &=

(3) |=

(4) <=

64. Which operator is used to Invert all the bits in a Binary Number?

(1) ~

(2) &=

(3) |=

(4) <=

65. An Array of similar data types which themselves are collections of dissimilar data types is :

(1) Tree

(2) Linked List

(3) Queue

(4) Array of Structure

66. Which bitwise operator is suitable for turning off a particular bit in a number?

(1) && operator

(2) & operator

(3) || operator

(4) ! operator

67. Which bitwise operator is suitable for turning on a particular bit in a number?

(1) && operator

(2) & operator

(3) || operator

(4) | operator

68. Which bitwise operator is suitable for checking whether a particular bit is on or off?

(1) && operator

(2) & operator

(3) || operator

(4) ! operator

69. Left shifting a number by 1 is always equivalent to:

(1) Multiplying it by 2

(2) Dividing it by 2

(3) Adding 2 to the number

(4) Subtracting 2 from the number

70. How do you initialize an array in C?

(1) Intarr[3]=(1,2,3);

(2) intarr(3)={1,2,3};

(3) intarr[3]={1,2,3};

(4) intarr(3)=(1,2,3);

71. What are the advantages of arrays?

(1) Objects of mixed data types can be stored

(2) Elements in an array cannot be sorted

(3) Index of first element of an array is 1

(4) Easier to store elements of same data type

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

(1) 15

(2) 19

(3) 11

(4) 60

73. If row-major order is used, how is the following matrix stored in memory?

a b c

d e f

g h i

(1) ihgfedcba

(2) abcdefghi

(3) cfibehadg

(4) adgbehcfi

74. If column-major order is used, how is the following matrix stored in memory?

a b c

d e f

g h i

(1) ihgfedcba

(2) abcdefghi

(3) cfibehadg

(4) adgbehcfi

75. What is the size of a C structure?

(1) C structure is always 128 bytes

(2) Size of C structure is the sum total of bytes of all elements of the structure

(3) Size of C structure is the size of largest elements

(4) None of the above

Rough Work
रफ कार्य