

Roll No.-----

Paper Code

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(To be filled in the
OMR Sheet)

प्रश्नपुस्तिका क्रमांक
Question Booklet No.

O.M.R. Serial No.

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प्रश्नपुस्तिका सीरीज
Question Booklet Series

A

BCA (Second Semester) Examination, July-2022

BCA-201(N)

**C Programming
(B.P.)**

Time : 1:30 Hours

Maximum Marks-100

जब तक कहा न जाय, इस प्रश्नपुस्तिका को न खोलें

निर्देश : — 1. परीक्षार्थी अपने अनुक्रमांक, विषय एवं प्रश्नपुस्तिका की सीरीज का विवरण यथास्थान सही- सही भरें, अन्यथा मूल्यांकन में किसी भी प्रकार की विसंगति की दशा में उसकी जिम्मेदारी स्वयं परीक्षार्थी की होगी।

2. इस प्रश्नपुस्तिका में 100 प्रश्न हैं, जिनमें से केवल 75 प्रश्नों के उत्तर परीक्षार्थियों द्वारा दिये जाने हैं। प्रत्येक प्रश्न के चार वैकल्पिक उत्तर प्रश्न के नीचे दिये गये हैं। इन चारों में से केवल एक ही उत्तर सही है। जिस उत्तर को आप सही या सबसे उचित समझते हैं, अपने उत्तर पत्रक (O.M.R. ANSWER SHEET) में उसके अक्षर वाले वृत्त को काले या नीले बाल प्वाइंट पेन से पूरा भर दें। यदि किसी परीक्षार्थी द्वारा किसी प्रश्न का एक से अधिक उत्तर दिया जाता है, तो उसे गलत उत्तर माना जायेगा।

3. प्रत्येक प्रश्न के अंक समान हैं। आप के जितने उत्तर सही होंगे, उन्हीं के अनुसार अंक प्रदान किये जायेंगे।
4. सभी उत्तर केवल ओ०एम०आर० उत्तर पत्रक (O.M.R. ANSWER SHEET) पर ही दिये जाने हैं। उत्तर पत्रक में निर्धारित स्थान के अलावा अन्यत्र कहीं पर दिया गया उत्तर मान्य नहीं होगा।
5. ओ०एम०आर० उत्तर पत्रक (O.M.R. ANSWER SHEET) पर कुछ भी लिखने से पूर्व उसमें दिये गये सभी अनुदेशों को सावधानीपूर्वक पढ़ लिया जाय।
6. परीक्षा समाप्ति के उपरान्त परीक्षार्थी कक्ष निरीक्षक को अपनी ओ०एम०आर० शीट उपलब्ध कराने के बाद ही परीक्षा कक्ष से प्रस्थान करें।
7. निगेटिव मार्किंग नहीं है।

महत्वपूर्ण : — प्रश्नपुस्तिका खोलने पर प्रथमतः जाँच कर देख लें कि प्रश्नपुस्तिका के सभी पृष्ठ भलीभाँति छपे हुए हैं। यदि प्रश्नपुस्तिका में कोई कमी हो, तो कक्ष निरीक्षक को दिखाकर उसी सीरीज की दूसरी प्रश्नपुस्तिका प्राप्त कर लें।

K-362

Rough Work / रफ कार्य

1. Which of these best describes an array ?
 - (A) A data structure that shows a hierarchical behavior
 - (B) Container of objects of similar types
 - (C) Arrays are immutable once initialized
 - (D) Array is not a data structure
2. 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);`
3. Which of the following concepts make extensive use of arrays ?
 - (A) Binary trees
 - (B) Scheduling of processes
 - (C) Caching
 - (D) Spatial locality
4. What are the advantages of arrays ?
 - (A) Objects of mixed data types can be stored
 - (B) Elements in an array cannot be sorted
 - (C) Index of first element of an array is 1
 - (D) Easier to store elements of same data type
5. Assuming int is of 4 bytes, what is the size of `int arr[15];` ?
 - (A) 15
 - (B) 19
 - (C) 11
 - (D) 60

6. In general, the index of the first element in an array is _____.
(A) 0
(B) -1
(C) 2
(D) 1
7. Elements in an array are accessed _____.
(A) Randomly
(B) Sequentially
(C) Exponentially
(D) logarithmically
8. Which is an indirection operator among the following ?
(A) &
(B) *
(C) ->
(D) .
9. Which of the following does not initialize ptr to null (assuming variable declaration of a as `int a = 0;`) ?
(A) `int *ptr = &a;`
(B) `int *ptr = &a - &a;`
(C) `int *ptr = a - a;`
(D) All of the mentioned
10. How to call a function without using the function name to send parameters ?
(A) typedefs
(B) Function pointer
(C) Both typedefs and function pointer
(D) None of the mentioned

11. Which of the following is a correct syntax to pass a function Pointer as an argument?
- (A) `void pass(int(*fptr)(int, float, char)){}`
 - (B) `void pass(*fptr(int, float, char)){}`
 - (C) `void pass(int(*fptr)){}`
 - (D) `void pass(*fptr){}`
12. Which of the following is not possible in C ?
- (A) Array of function pointer
 - (B) Returning a function pointer
 - (C) Comparison of function pointer
 - (D) None of the mentioned
13. Which of the following declaration will result in run-time error ?
- (A) `int **c = &c;`
 - (B) `int **c = &*c;`
 - (C) `int **c = **c;`
 - (D) None of the mentioned
14. Which of the following is the correct syntax to send an array as a parameter to function ?
- (A) `func(&array);`
 - (B) `func(#array);`
 - (C) `func(*array);`
 - (D) `func(array[size]);`
15. Local variables are stored in an area called _____.
- (A) Heap
 - (B) Permanent storage area
 - (C) Free memory
 - (D) Stack

16. Choose the statement which is incorrect with respect to dynamic memory allocation:
- (A) Memory is allocated in a less structured area of memory, known as heap
 - (B) Used for unpredictable memory requirements
 - (C) Execution of the program is faster than that of static memory allocation
 - (D) Allocated memory can be changed during the run time of the program based on the requirement of the program
17. Which of the following header files must necessarily be included to use dynamic memory allocation functions ?
- (A) `stdlib.h`
 - (B) `stdio.h`
 - (C) `memory.h`
 - (D) `dos.h`
18. Which of the following is an example for non linear data type ?
- (A) Tree
 - (B) Array
 - (C) Linked list
 - (D) Queue
19. Which of the following is an example of static memory allocation ?
- (A) Linked list
 - (B) Stack
 - (C) Queue
 - (D) Array
20. A string in C is :
- (A) 1-D Array of character
 - (B) 2-D Array of character
 - (C) Any of (A) & (B)
 - (D) None of the above

21. A string constant in C terminated by :
- (A) `'\0'`
 - (B) `'\\0'`
 - (C) `"`
 - (D) `" "`
22. Any function working with String knows the String has ended when it encounters :
- (A) Null character
 - (B) Empty space
 - (C) `"\1"`
 - (D) Pointer
23. Which of the following is format specification for printing String in `printf()` ?
- (A) `%d`
 - (B) `%c`
 - (C) `%f`
 - (D) `%s`
24. To receive multi-word string from keyboard which of the function is more appropriate ?
- (A) `scanf`
 - (B) `gets()`
 - (C) Both
 - (D) None of the above

25. What will be the output of the following C code ?

```
#include<stdio.h>

int main()
{
    int a = 2;
    if (a>>1)
        printf("%d\n", a);
}
```

- (A) 0
- (B) 1
- (C) 2
- (D) No output

26. Which string method helps find length of string ?

- (A) strlen()
- (B) strlen
- (C) strdup
- (D) Both (A) & (B)

27. Which of the following function duplicates a string ?

- (A) strnset
- (B) strstr
- (C) strdup
- (D) strcmp

28. Which among the following is Copying function ?

- (A) memcpy()
- (B) strcpy()
- (C) memcopy()
- (D) strxcpy()

29. Which function will you choose to join two words ?
- (A) strcpy()
 - (B) strcat()
 - (C) strncon()
 - (D) memcon()
30. The _____ function appends not more than n characters.
- (A) strcat()
 - (B) strcon()
 - (C) strncat()
 - (D) memcat()
31. What will strcmp() function do ?
- (A) Compares the first n characters of the object
 - (B) Compares the string
 - (C) Undefined function
 - (D) Copies the string
32. What is the prototype of strcoll() function ?
- (A) int strcoll(const char *s1, const char *s2)
 - (B) int strcoll(const char *s1)
 - (C) int strcoll(const *s1, const *s2)
 - (D) int strcoll(const *s1)
33. What is the function of strcoll() ?
- (A) Compares the string, result is dependent on the LC_COLLATE
 - (B) Copies the string, result is dependent on the LC_COLLATE
 - (C) Compares the string, result is not dependent on the LC_COLLATE
 - (D) Copies the string, result is not dependent on the LC_COLLATE
34. Which of the following is the variable type defined in header string.h ?
- (A) sizet
 - (B) size
 - (C) size_t
 - (D) size-t

35. What is the return value of `strxfrm()` ?
- (A) Length of the transformed string, not including the terminating null-character
 - (B) Length of the transformed string, including the terminating null-character
 - (C) Display the transformed string, not including the terminating null-character
 - (D) Display the transformed string, including the terminating null-character
36. The _____ function returns a pointer to the first character of a token.
- (A) `strstr()`
 - (B) `strcpy()`
 - (C) `strspn()`
 - (D) `strtok()`
37. Which of the following function returns a pointer to the located string or a null pointer if string is not found ?
- (A) `strtok()`
 - (B) `strstr()`
 - (C) `strspn()`
 - (D) `strchr()`
38. Which of the given function is used to return a pointer to the located character ?
- (A) `strchr()`
 - (B) `strxfrm()`
 - (C) `memchar()`
 - (D) `strchar()`
39. The _____ function returns the number of characters that are present before the terminating null character.
- (A) `strlen()`
 - (B) `strlen()`
 - (C) `strlent()`
 - (D) `strchr()`

40. Use _____ to determine the null-terminated message string that corresponds to the error code `errcode`.
- (A) `strerror()`
 - (B) `strstr()`
 - (C) `strxfrm()`
 - (D) `memset()`
41. Which of the following is not possible under any scenario ?
- (A) `s1 = &s2;`
 - (B) `s1 = s2;`
 - (C) `(*s1).number = 10;`
 - (D) None of the mentioned
42. Which of the following operation is illegal in structures ?
- (A) Typecasting of structure
 - (B) Pointer to a variable of the same structure
 - (C) Dynamic allocation of memory for structure
 - (D) All of the mentioned
43. Presence of code like “`s.t.b = 10`” indicates _____.
- (A) Syntax Error
 - (B) Structure
 - (C) Double data type
 - (D) An ordinary variable name
44. Which of the following are themselves a collection of different data types?
- (A) string
 - (B) structures
 - (C) char
 - (D) All of the mentioned
45. User-defined data type can be derived by _____.
- (A) `struct`
 - (B) `enum`
 - (C) `typedef`
 - (D) All of the mentioned

46. Which operator connects the structure name to its member name ?
- (A) –
 - (B) <-
 - (C) .
 - (D) Both <- and .
47. Which of the following cannot be a structure member ?
- (A) Another structure
 - (B) Function
 - (C) Array
 - (D) None of the mentioned
48. Which of the following uses structure ?
- (A) Array of structures
 - (B) Linked lists
 - (C) Binary tree
 - (D) All of the mentioned
49. 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
50. Which of the following is an incorrect syntax to pass by reference a member of a structure in a function ?
- (Assume : struct temp {int a;} s;)
- (A) func(&s.a);
 - (B) func(&(s).a);
 - (C) func(&(s.a));
 - (D) None of the mentioned

51. Which option is not possible for the following function call ?
- (A) Compiler can access entire structure from the function
 - (B) Individual member's address can be displayed in structure
 - (C) Individual member can be passed by reference in a function
 - (D) None of the mentioned
52. Which of the following return-type cannot be used for a function in C ?
- (A) char*
 - (B) struct
 - (C) void
 - (D) None of the mentioned
53. What is a structure in C language ?
- (A) A structure is a collection of elements that can be of same datatype
 - (B) A structure is a collection of elements that can be of different datatype
 - (C) Elements of a structure are called members
 - (D) All of these
54. 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 elements
 - (D) None of the above
55. Choose a correct statement about C structure elements ?
- (A) Structure elements are stored on random free memory locations
 - (B) Structure elements are stored in register memory locations
 - (C) Structure elements are stored in contiguous memory locations
 - (D) None of the above

56. A C structure or User defined datatype is also called _____.
(A) Derived data type
(B) Secondary data type
(C) Aggregate data type
(D) All the above
57. What are the uses of C Structures ?
(A) Structure is used to implement Linked Lists, Stack and Queue data structure
(B) Structures are used to Operating System functionality like Display and Input taking
(C) Structure are used to exchange information with peripherals of PC
(D) All the above
58. Choose a correct statement about C structures :
(A) A structure can contain same structure type member
(B) A structure size is limited by only physical memory of that PC
(C) You can define an unlimited number of members inside a structure
(D) All the above
59. Which of the following are themselves a collection of different data types ?
(A) String
(B) structure
(C) Char
(D) All of the mentioned
60. Which operator connects the structure name to its member name ?
(A) –
(B) .
(C) Both (A) and (B)
(D) None of these

61. Which of the following cannot be a structure member ?
- (A) Another structure
 - (B) Function
 - (C) Array
 - (D) None of the mentioned
62. What are the types of data allowed inside a structure ?
- (A) int, float, double, long double
 - (B) char, enum, union
 - (C) Pointers and Same structure type members
 - (D) All the above
63. What is actually passed if you pass a structure variable to a function ?
- (A) Copy of structure variable
 - (B) Reference of structure variable
 - (C) Starting address of structure variable
 - (D) Ending address of structure variable
64. Which of the following return-type cannot be used for a function in C ?
- (A) An array stores only elements of same type. Accessing elements is easy
 - (B) A structure is preferred when different type elements are to be combined as a single entity
 - (C) An array implementation has performance improvements to structure
 - (D) All the above
65. Which of the following is a collection of different data types ?
- (A) String
 - (B) Array
 - (C) Structure
 - (D) Files

66. The size of a union is determined by the 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
67. Members of a union are accessed as _____.
(A) union-name.member
(B) union-pointer->member
(C) Both union-name.member & union-pointer->member
(D) None of the mentioned
68. Which of the following share a similarity in syntax ?
1. Union, 2. Structure, 3. Arrays and 4. Pointers
(A) 3 and 4
(B) 1 and 2
(C) 1 and 3
(D) 1, 3 and 4
69. The preprocessor directive used to give additional information to the compiler, beyond which is conveyed in the language _____.
(A) #include
(B) #define
(C) #pragma
(D) #elif
70. In the directive, #pragma pack(n), which of the following is not a valid value of n ?
(A) 1
(B) 2
(C) 3
(D) 4

71. Which of the following attributes is used to specify that the minimum required memory to be used to represent the types ?
- (A) Packed
 - (B) Aligned
 - (C) Unused
 - (D) Deprecated
72. In the directive `#pragma pack(n)`, if the value of 'n' is given to be 5, then what happens ?
- (A) Error
 - (B) Warning but no error
 - (C) Executes the pragma statement
 - (D) Ignores the pragma statement and executes the program
73. The correct syntax of the attribute packed is _____.
- (A) `__attribute__((packed));`
 - (B) `_attribute(packed);`
 - (C) `_attribute__((packed));`
 - (D) `__attribute__(packed);`
74. _____ is the preprocessor directive which is used to end the scope of `#ifdef`.
- (A) `#elif`
 - (B) `#ifndef`
 - (C) `#endif`
 - (D) `#if`
75. What will be the output of the following C code ?
- ```
#include<stdio.h>void main(){
 #ifndef max
 printf("hello");
 #endif
 printf("hi");}
```
- (A) hello
  - (B) hellohi
  - (C) error
  - (D) hi

76. The preprocessor directive which checks whether a constant expression results in a zero or non-zero value \_\_\_\_\_.  
(A) #if  
(B) #ifdef  
(C) #undef  
(D) #ifndef
77. The preprocessor directive which is used to remove the definition of an identifier which was previously defined with #define ?  
(A) #ifdef  
(B) #undef  
(C) #ifndef  
(D) #def
78. What will be the output of the following C code ?  

```
#include<stdio.h>#define hello 10void main() {
 printf("%d", hello);
 #undef hello
 printf("%d", hello);}
```

  
(A) 10  
(B) hello  
(C) error  
(D) 1010
79. The purpose of the preprocessor directive #error is that \_\_\_\_\_.  
(A) It rectifies any error present in the code  
(B) It rectifies only the first error which occurs in the code  
(C) It causes the preprocessor to report a fatal error  
(D) It causes the preprocessor to ignore an error

80. Which of the following is not a preprocessor directive ?

- (A) `#error`
- (B) `#pragma`
- (C) `#if`
- (D) `#ifndef`

81. Which of the following is a stringizing operator ?

- (A) `<>`
- (B) `#`
- (C) `%`
- (D) `##`

82. What will be the output of the following C code ?

```
#define display(text) printf(#text "@")
```

```
main(){
```

```
 display(hello.);
```

```
 display(good morning!);}
```

- (A) `hello.@good morning!`
- (B) `error`
- (C) `hello.good morning!@`
- (D) `hello.@good morning!@`

83. What will be the output of the following C code ?

```
#define hello(c) #c
```

```
main(){
```

```
 printf(hello(i,am));}
```

- (A) `i,am`
- (B) `iam`
- (C) `i am`
- (D) `error`

84. Which of the following operators is used to concatenate two strings without space ?
- (A) #
  - (B) < >
  - (C) \*\*
  - (D) ##
85. 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)
86. Which 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
87. If the mode includes b after the initial letter, what does it indicates ?
- (A) text file
  - (B) big text file
  - (C) binary file
  - (D) blueprint text
88. fflush(NULL) flushes all \_\_\_\_\_.
- (A) input streams
  - (B) output streams
  - (C) previous contents
  - (D) appended text

89. \_\_\_\_\_ removes the named file, so that a subsequent attempt to open it will fail.
- (A) remove(const \*filename)
  - (B) remove(filename)
  - (C) remove()
  - (D) fclose(filename)
90. What is the function of FILE \*tmpfile(void) ?
- (A) Creates a temporary file of mode “wb+”
  - (B) Creates a temporary file of mode “wb”
  - (C) Creates a temporary file of mode “w”
  - (D) Creates a temporary file of mode “w+”
91. What does tmpfile() returns when it could not create the file ?
- (A) Stream and NULL
  - (B) Only stream
  - (C) Only NULL
  - (D) Does not return anything
92. EOF is an integer type defined in stdio.h and has a value \_\_\_\_\_.
- (A) 1
  - (B) 0
  - (C) NULL
  - (D) -1
93. What is the function of fputs() ?
- (A) Read a line from a file
  - (B) Read a character from a file
  - (C) Write a character to a file
  - (D) Write a line to a file

94. Which function will return the current file position for stream ?
- (A) fgetpos()
  - (B) fseek()
  - (C) ftell()
  - (D) fsetpos()
95. Which functions is declared in <errno.h> ?
- (A) fseek()
  - (B) ftell()
  - (C) ferror()
  - (D) fsetpos()
96. The \_\_\_\_\_ function reads atmost one less than the number of characters specified by size from the given stream and it is stored in the string str.
- (A) fget()
  - (B) fgets()
  - (C) fput()
  - (D) fputs()
97. What does the following C code snippet mean ?
- ```
int ungetc(int c, FILE *stream)
```
- (A) Pushes c back onto a stream
 - (B) Deletes c form the stream
 - (C) Reads frequency of c in stream
 - (D) No action is taken by the command
98. Choose the correct difference between getc() and fgetc() :
- (A) If it is not a macro, it may evaluate stream more than once
 - (B) If it is a macro, it may not evaluate stream more than once
 - (C) If it is a macro, it may evaluate stream more than once
 - (D) No difference between fgetc() and getc()

99. What will be the output of the following C code ?

```
#include<stdio.h>

int main()
{
    int c = 2^3;
    printf("%d\n", c);
}
```

(A) 1

(B) 8

(C) 9

(D) 0

100. What will be the output of the following C code ?

```
#include<stdio.h>

void main()
{
    int x = 97;
    int y = sizeof(x++);
    printf("x is %d", x);
}
```

(A) x is 97

(B) x is 98

(C) x is 99

(D) Run time error

DO NOT OPEN THE QUESTION BOOKLET UNTIL ASKED TO DO SO

1. Examinee should enter his / her roll number, subject and Question Booklet Series correctly in the O.M.R. sheet, the examinee will be responsible for the error he / she has made.
 2. **This Question Booklet contains 100 questions, out of which only 75 Question are to be Answered by the examinee. Every question has 4 options and only one of them is correct. The answer which seems correct to you, darken that option number in your Answer Booklet (O.M.R ANSWER SHEET) completely with black or blue ball point pen. If any examinee will mark more than one answer of a particular question, then the answer will be marked as wrong.**
 3. Every question has same marks. Every question you attempt correctly, marks will be given according to that.
 4. Every answer should be marked only on Answer Booklet (O.M.R ANSWER SHEET). Answer marked anywhere else other than the determined place will not be considered valid.
 5. Please read all the instructions carefully before attempting anything on Answer Booklet (O.M.R ANSWER SHEET).
 6. After completion of examination, please hand over the O.M.R. SHEET to the Examiner before leaving the examination room.
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- Note:** On opening the question booklet, first check that all the pages of the question booklet are printed properly in case there is an issue please ask the examiner to change the booklet of same series and get another one.