

Roll No. ....

**D-991**

**M. A./M. Sc. (Fourth Semester) (Main/ATKT)  
EXAMINATION, May-June, 2020**

MATHEMATICS

Paper Fifth (A)

**[Programming in C (with ANSI Features)-II]**

*Time : Three Hours ]**[ Maximum Marks : 70***Note :** Attempt all Sections as directed.**Section—A**

1 each

**(Objective/Multiple Choice Questions)****Note :** Attempt all questions.

Choose the correct answer :

- Which is not a storage class ?
  - Auto
  - Struct
  - Typedef
  - Static
- Which of the following statements is correct ?
  - The value stored in the CPU register can always be accessed faster than that stored in memory.

**P. T. O.**

- A register storage class variable will always be stored in a CPU register.
  - Only I is correct.
  - Only II is correct.
  - Both I and II are correct.
  - Both I and II are incorrect.
- In case of a conflict between the names of a local and global variable what happens ?
  - The global variable is given a priority.
  - The local variable is given a priority.
  - Which one will get a priority depends upon which one is defined first.
  - The compiler reports an error.
- Where will the space be allocated for an automatic storage class variable ?
  - In CPU register
  - In memory as well as in CPU
  - In memory
  - On disc
- What is the format specifier used to print a string or character array in C printf or scanf function ?
  - %C
  - %f
  - %S
  - %W

6. Choose a correct statement about C language arrays :
- (a) An array address is the address of first element of array itself.
  - (b) An array size must be declared if not initialized immediately.
  - (c) Array size is the sum of sizes of all elements of the array.
  - (d) All of the above
7. Which of the following is the correct syntax to declare a 3-dimensional array using pointers ?
- (a) `Char * a [ ], [ ];`
  - (b) `Char ** a [ ];`
  - (c) `Char *** a;`
  - (d) All of the mentioned
8. 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]);`
9. Any C program :
- (a) Must contain at least one function
  - (b) Need not contain any function
  - (c) Needs input data
  - (d) None of the above

**P. T. O.**

10. What will happen after compiling and running the following code ?
- ```
main()
{
    printf ("%p", main);
}
```
- (a) Error
  - (b) Will make an infinite loop
  - (c) Some address will be printed
  - (d) None of these
11. Chose the correct statement :
- (I) The body of a function should have only one return statement.
  - (II) The body of a function may have many return statement.
  - (III) A function can return only one value to the calling environment.
  - (IV) If return statement is omitted, then the function does its job but returns no value to the calling environment.
- (a) I and II
  - (b) I and III
  - (c) II and III
  - (d) II and IV
12. The default parameter passing mechanism is :
- (a) Call by value
  - (b) Call by reference
  - (c) Cell by value result
  - (d) None of these

13. Choose the statement which is incorrect with respect to dynamic memory allocation :
- (a) Memory is allocated in a less structured area of a 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 runtime of the program based on the requirement of the program.
14. Which of the following operators can be applied on structure variable ?
- (a) Equality comparison (==)
  - (b) Assignment (=)
  - (c) Both of the above
  - (d) None of the above
15. How will you free the allocated memory ?
- (a) Remove (var\_name);
  - (b) Free (var\_name);
  - (c) Delete (var\_name);
  - (d) Dalloc (var\_name);
16. Choose correct statement about union :
- (a) It is used defined data type.
  - (b) Union is defined by keyword union.
  - (c) Dot operator (.) is used to access members of a union.
  - (d) All of the above

**P. T. O.**

17. What is a C FILE data type ?
- (a) FILE is like a structure only
  - (b) FILE is like a union only
  - (c) FILE is like a userdefine int data type
  - (d) None of the above
18. Where is a file temporarily stored before read or write operations in C language ?
- (a) Notepad
  - (b) RAM
  - (c) Hard Disk
  - (d) Buffer
19. What are the C functions used to read or write a file in Binary mode ?
- (a) fprintf ( ), fscanf ( );
  - (b) fread ( ), rwrite ( );
  - (c) readf ( ), writef ( );
  - (d) printf ( ), scanf ( );
20. Choose the correct syntax for FSCANF and FPRINTF in C language :
- (a) fprintf ("format specifier", variable, fp);  
fscanf ("format specifier", variable, fp);
  - (b) fprintf (fp, count, "format specifier", variable);  
fscanf (fp, count, "format specifier", variable);
  - (c) fprintf (fp, "format specifier", variable);  
fscanf (fp, "format specifier", variable);
  - (d) None of the above

[ 7 ]

D-991

**Section—B**

1 each

**(Very Short Answer Type Questions)**

**Note :** Attempt all questions. Answer in 1-2 sentences.

1. Write name of different storage classes.
2. Define global variable.
3. Write the name of any *two* sorting algorithms.
4. Write the syntax of multidimensional array.
5. What is conditional compilation ?
6. Write any *two* uses of functions.
7. Why do we use structure in C program ?
8. What is linked list ?
9. Explain < stdio.h > header file.
10. Write any *two* operations which are used during file handling.

**Section—C**

2 each

**(Short Answer Type Questions)**

**Note :** Attempt all questions. Answer in 2-3 sentences.

1. Write keywords that are used for different storage classes.
2. What is scope of global variable ?
3. Write the name of standard library string functions.
4. Explain pointer arithmetic.
5. What is recursion ?
6. Write a short note on main functions.
7. Explain enum declaration.
8. Explain array of structure.
9. What is buffer ?
10. What is error handling ?

**P. T. O.**

[ 8 ]

D-991

**Section—D**

4 each

**(Long Answer Type Questions)**

**Note :** Attempt all questions.

1. Explain automatic storage class and register storage class.

*Or*

Explain static storage class and external storage class.

2. Write a short note on accessing array elements through pointers with an example.

*Or*

Write a program that converts all lowercase character in a given string to its equivalent uppercase character.

3. Explain # if and # elif directives with an example.

*Or*

Explain call by value and call by reference.

4. Write difference between structure and union.

*Or*

Write a note on dynamic memory allocation.

5. What is file ? How to open and close a file ?

*Or*

Explain standard library for input and output.

D-991