Roll No. ....

E–999

M. A./M. Sc. (Fourth Semester) (Main/ATKT)

EXAMINATION, May-June, 2021

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 :

1. Which among the following is a global variable ?

    (a)   Auto

    (b)   Register

    (c)   Extern

    (d)   Static

P. T. O.

2. What is the output of the program ?

    # include < stdio.h >

    # include < conio.h >

      int main( )

       {

         printf ("In The Sky");

        }

    (a)   in the sky

    (b)   Compiler error

    (c)   In The Sky

    (d)   No output

3. The initial default value of register is :

    (a)   Garbage value

    (b)   –1

    (c)   1

    (d)   0

4. The statement below is .... q
    extern int P.

    (a)   Declaration

    (b)   Definition

    (c)   Initialization

    (d)   None of the above

5. An array idea starts with :

    (a)   –1

    (b)   2

    (c)   1

    (d)   0

6. Which one of the following is true for pointer operation ?

    (a)   Two pointers variable can be added.

    (b)   A pointer variable can be multiplied by a constant.

    (c)   A pointer variable can be initialized with NULL or 0
           value.

    (d)   A pointer variable cannot be assigned the values of
           another pointer variable.

7. What is an string in 'C' language ?

    (a)   String is an array of character.

    (b)   String is a new data type in C.

    (c)   String is an array of integers with 0.

    (d)   String is an array of character with NULL character as
           the first element of array.

8. If P* is a double pointer with an initial value 319, then after
    the operation P* = P* + 3 the value of P* will be :

    (a)   322

    (b)   343

    (c)   325

    (d)   331

9. Every C program should contain which function ?

    (a)   scanf ( )

    (b)   main ( )

    (c)   disp( )

    (d)   printf ( )

P. T. O.

10. What is the output of this program ?

    # include < stdio.h >

    # define X 3

    int main( )

     {

        int i;

         i ; X*X*X;

        printf ("%d", i);

        return 0;

     }

    (a)   Garbage value

    (b)   X is not declared

    (c)   27

    (d)   No output

11. Directives are translated by the :

    (a)   Pre-processor

    (b)   Linker

    (c)   Compiler

    (d)   Editor

12. A function which calls itself is called a/an ....

    (a)   Self-function

    (b)   Recursive function

    (c)   Autofunction

    (d)   Static function

13. A user defined data type, which is used to assign names to integral constants is called :
    (a) Union
    (b) Enum
    (c) Structure
    (d) Array

14. Members of a union are accessed as ....
    (a) Union-name member
    (b) Union-pointer → member
    (c) Both (a) and (b)
    (d) None of the above

15. Which operator connects the structure name to its member name ?
    (a) —
    (b) .
    (c) Both (a) and (b)
    (d) None of the above

16. Among 4 header files, which should be included to use the memory allocation functions ?
    (a) # include < string h >
    (b) # include < math. h >
    (c) # include < stdlib. h >
    (d) # include < memory. h >

17. Which of the following is true about FILE*fp :
    (a) FILE is a stream.
    (b) FILE is a structure and fp is a pointer to the structure of FILE type.
    (c) FILE is a buffered stream.
    (d) FILE is a keyword in C for representing files.

P. T. O.

18. Which one is incorrect :
    (a) get C( ) means writes a character from a file.
    (b) rewind( ) means sets the position to the beginning of the file.
    (c) f print( ) means writes a set of data values to a file.
    (d) f open( ) means creates a new file for use.

19. get C( ) returns EOF when :
    (a) when and of file is reached
    (b) when get C( ) fail to read the character
    (c) when get C( ) fail to write the character
    (d) None of the above

20. Which one is correct meaning of fseek (*fp, m, o*) ?
    (a) Go forward by *m* bytes.
    (b) Go to the beginning.
    (c) Stay at the current position.
    (d) Move to (*m* + 1)th byte in the file.

Section—B   1 each

(Very Short Answer Type Questions)

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

1. What is local variable in C programming ?
2. Define static storage class.
3. Define arrays of pointer.
4. Define pointer-to-pointer variable in C language.
5. Define conditional compilation.
6. How many memory allocation functions are in C ? Write their name.

7.   What is enum declaration ?

8.   Define f-tell ( ) and rewind ( ).

9.   Define fprintf ( ) function.

10. How to declare function passing argument ?

Section—C   2 each

(Short Answer Type Questions)

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

1.   Define automatic storage class variable.

2.   Define register specifier.

3.   Write a program for sorting given number using selection sort technique.

4.   What is String ? How to declare string variable ?

5.   What is main( ) in C ?

6.   Explain linked list.

7.   Define input and output streams.

8.   What is error-handling ?

9.   Define macro substitution with suitable example.

10. Write a C program to store records of five students in array of structure.

Section—D   4 each

(Long Answer Type Questions)

Note : Attempt all questions.

1.   Explain register storage class and external storage class.

Or

Explain ANSI rules for the syntax and semantics of the storage class keywords.

2.   Explain the following :

(a)   Accessing array elements through pointers

(b)   Array of pointer

P. T. O.

Or

Explain strcpy( ), strcat( ) and write a program to count total number of alphabets, digits and special character in a string without using string handling function.

3.   Explain the following :

(a)   Line control

(b)   Pre-processor in C

Or

Write difference between call by value and call by reference with suitable example.

4.   Write a program to maintenance the book record using of structure with the following members :

acc. no, title, author, publisher, year, price and sort the record on the basis of acc. no.

Or

Distinguish between structure and union.

5.   Define the following :

(i)   getc( )

(ii)   putc( )

(iii) fscanf( )

(iv)   feof( )

Or

Write a C program for accept series of integer and separate even and odd integer to different files.

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