18CSS101J-1 to 2 Sem - PYQ

Programming For Problem Solving (SRM Institute of Science and Technology)

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PART – B (5 × 10 = 50 Marks)
Answer ALL Questions

		Marks	BL	CO	PO

26. a. What is a flowchart? List and define the purpose of symbols used to represent a flowchart with an example. — 10 2 1 1

(OR)

b. Illustrate the uses of bitwise operators through suitable examples. — 10 2 1 1

27. a. Write a C program to display 'n' terms of natural numbers and their sum. — 10 4 2 3

Sample input: 7
Expected output:
> The first seven natural numbers are:
> 1 2 3 4 5 6 7
> Sum upto 7 terms: 28

(OR)

b. Write a C program to find the minimum and maximum element in an array. — 10 4 2 3

Sample input:
Input the number of elements to be read:5
Input five elements of the array:
> Element 1: 34
> Element 2: 46
> Element 3: 03
> Element 4: 22
> Element 5: 18
Expected output:
> Minimum element: 03
> Maximum element: 46

28. a.i. What is the difference between pass by value and pass by reference? Explain with an example. — 4 3 3 4

ii. Write the C coding for swapping two numbers using pass by reference. Trace with an example. — 6 3 3 4

(OR)

b. Write a C program to reverse a string using recursive function. For a specific example trace the program. — 10 3 3 4

29. a. Define structure in C. Also explain how pointers are used with structure with suitable example. — 2+8 2 4 3

(OR)

b. Write about various pragma directives and explain in detail. — 10 2 4 3

30. a. Write a C program to illustrate array of structures. — 10 3 5,6 12

(OR)

b. Write a C program to find the average of number stored in sequential access file. — 10 3 5,6 12

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B.Tech. DEGREE EXAMINATION, MAY 2022
First & Second Semester

18CSS101J – PROGRAMMING FOR PROBLEM SOLVING
(For the candidates admitted from the academic year 2018-2019 to 2019-2020)

Note:
(i) **Part - A** should be answered in OMR sheet within first 40 minutes and OMR sheet should be handed over to hall invigilator at the end of 40th minute.
(ii) **Part - B** should be answered in answer booklet.

Time: 2½ Hours — Max. Marks: 75

PART – A (25 × 1 = 25 Marks)
Answer ALL Questions

		Marks	BL	CO	PO

1. Which of the following is an invalid expression in C language? — 1 4 1 1
   (A) result = $a++-b*2$;
   (B) result = $++a*5$;
   (C) result = $/4$;
   (D) result = $2,4$;

2. What symbol does the C-preprocessor start with? — 1 1 2 1
   (A) #
   (B) $
   (C) " "
   (D) &

3. The format specifier that is used to read or write an integer is _____. — 1 1 1 1
   (A) %i
   (B) %f
   (C) %i or %d
   (D) %d

4. _____ is not a storage class. — 1 2 1 2
   (A) struct
   (B) auto
   (C) static
   (D) extern

5. What is the output of this statement printf("%d", (a++)); — 1 4 1 2
   (A) Error messages
   (B) Garbage value
   (C) The current value of a
   (D) The value of (a+1)

6. What is the result of logical or relational expression in C? — 1 2 2 2,3
   (A) True or False
   (B) 0 or 1
   (C) False if 0
   (D) 0 if an expression is false and any positive number if an expression is true

7. What is the output of the following C program? — 1 3 2 3,2

```
int main ( )
{ int a [ ]; a[4] = {1,2,3,4};
  printf ("%d", a[0]); return 0;
}
```
   (A) 1
   (B) 2
   (C) 0
   (D) Compilation error

8. Which is these best describes an array? | 1 | 1 | 2 | 2,3
   (A) A data structure that shows a hierarchical behavior
   (B) Container of objects of similar objects
   (C) Arrays are immutable once initialized
   (D) Array is not a data structure

9. Which of the following operators takes only integer operands? | 1 | 2 | 2 | 3
   (A) +
   (B) *
   (C) /
   (D) %

10. How many times will the following loop in C program execute? | 1 | 4 | 2 | 3
    for (j = 1; j < = 10; j = j –1)
    (A) Forever
    (B) Never
    (C) 10 times
    (D) 1

11. Which loop in C program is faster, for while or do…while? | 1 | 3 | 3 | 4
    (A) for
    (B) while
    (C) do…while
    (D) All work at same speed

12. Choose a correct statement about C string. | 1 | 1 | 3 | 4
    char ary [ ] = "Hello…!";
    (A) Character array, ary is a string
    (B) Ary has no null character at the end
    (C) String size is not mentioned
    (D) String cannot contain special characters

13. What is the output of C program with arrays? | 1 | 4 | 3 | 3
    ```
    int main ( )
    { char str = {"P", "E", "T", "\0"};
      printf ("%s", str); return 0;
    }
    ```
    (A) P
    (B) PET
    (C) PET\0
    (D) Complier error

14. Which function will you choose to join two words in C program? | 1 | 1 | 3 | 1,3
    (A) strcpy ( )
    (B) strcat ( )
    (C) strjoin ( )
    (D) strncat ( )

15. What will strcmp ( ) function do? | 1 | 1 | 3 | 1,3
    (A) Compares the first 'n' characters of the object
    (B) Undefined function
    (C) Copies the string
    (D) Compares the string

16. What is the keyword used to define a C macro? | 1 | 1 | 4 | 1,3
    (A) def
    (B) define
    (C) defy
    (D) definition

17. What is the C keyword used to create global constants? | 1 | 1 | 4 | 1
    (A) constant
    (B) def
    (C) define
    (D) CONSTANT

18. Comment on the following pointer declaration in C? | 1 | 4 | 4 | 2
    int *ptr, P;
    (A) ptr is a pointer to integer, P is not a pointer
    (B) ptr and P, both are pointers to integer
    (C) ptr is pointer to integer, P may or may not be
    (D) ptr and P both are not pointers to integer

19. Address stored in the pointer variable is of type _____ in C programs. | 1 | 2 | 4 | 2
    (A) integer
    (B) float
    (C) character
    (D) boolean

20. A function which calls itself is called as _____. | 1 | 2 | 4 | 2
    (A) self function
    (B) static function
    (C) auto function
    (D) recursive function

21. What will be the output of the following C code on a 64 bit machine? | 1 | 3 | 5 | 1,2
    ```
    #include <stdio.h>  int main ( )
    union var        { union var v1;
    { int num;           printf ("%d", size of (v1));
      char c;            return 0;
    };                }
    ```
    (A) 8
    (B) 5
    (C) 4
    (D) 9

22. What is the output of this C code? | 1 | 3 | 5 | 1,2
    ```
    # include <stdio.h>
      main ( )
      { char *p = "SRM Test Paper";
          p [0] = 'a';
          p [1] = 'b';
          printf ("%s", p);
      }
    ```
    (A) abM Test paper
    (B) SRM Test paper
    (C) Compile Time Error
    (D) Run Time Error

23. EOF is an integer type defined in stdio.h and has a value _____. | 1 | 2 | 6 | 1,2
    (A) 1
    (B) 0
    (C) –1
    (D) Null

24. Which one of the following is correct syntax for opening a file in C language? | 1 | 3 | 6 | 1,2
    (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);

25. The correct syntax to access the member of the ith structure in the array of structure is? | 1 | 4 | 6 | 1,2
    ```
    struct temp
    { int b;
    } s[50];
    ```
    (A) s.b.[i];
    (B) s.[i].b;
    (C) s.b[i];
    (D) s [i].b;