Reg. No. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

B.Tech/ M.Tech (Integrated) DEGREE EXAMINATION, JULY 2024

First Semester

21CSS101J – PROGRAMMING FOR PROBLEM SOLVING

(For the candidates admitted from the academic year 2022-2023 onwards)

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** and **Part - C** should be answered in answer booklet.

Time: 3 Hours

Max. Marks: 75

PART – A (20 × 1 = 20Marks)
Answer **ALL** Questions

	Marks	BL	CO	PO

1. The special character _____ can be used to declare a variable in C programming.   (1, 1, 1, 1)
   (A) Anything   (B) Nothing
   (C) Underscore   (D) Hyphen

2. _____ is the first step in the problem-solving process.   (1, 1, 1, 1)
   (A) Generate potential solutions   (B) Define the problem
   (C) Implement the solution   (D) Evaluate alternatives

3. Determine the correct output   (1, 1, 1, 1)
   float C = 3.14;
   printf ("%f ", C%2);
   (A) 1.0   (B) 4
   (C) 1.1   (D) 2

4. Find the meaning of following statement   (1, 2, 1, 1)
   f = (x>y)? x:y;
   (A) f points to max of x&y   (B) f points to min of x&y
   (C) f points to addition of x&y   (D) Compile error

5. The 'Continue' statement cannot be used with   (1, 2, 2, 1)
   (A) While   (B) Do while
   (C) For   (D) Switch case

6. _____ does the scanf ( ) function do in C   (1, 1, 2, 1)
   (A) Print output to console   (B) Reads input from the user
   (C) Copies one string to another   (D) Concatenates two strings

7. _____ control statements is used for executing a set of statement when a specific condition is set.   (1, 1, 2, 1)
   (A) Simple if statement   (B) Nested for loop
   (C) Point dereferencing   (D) Null pointer

8. The sequential controlled loop is also known as _____ loop.   (1, 1, 2, 1)
   (A) Indefinite repetition loop   (B) Time delay
   (C) Definite repetition loop   (D) Infinite

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9. The keyword used to transfer the control from a function back to the calling function in C is _____.   1 2 3 1
   (A) Goto
   (B) Back
   (C) Return
   (D) Goback

10. The while is an _____ loop statement.   1 1 3 1
    (A) Entry controlled
    (B) Exit controlled
    (C) Indefinite repetition
    (D) Definite repetition

11. _____ is the purpose of the scanf ( ) function in C   1 2 3 1
    (A) Prints formatted output to a string
    (B) Reads formatted input from a string
    (C) Reads a string from the standard input
    (D) Prints formatting output to the standard output

12. _____ library should be included to use the strcpy ( ) function in C   1 2 3 1
    (A) stdleb.h
    (B) stdio.h
    (C) string.h
    (D) math.h

13. _____ of the following give an error.   1 2 3 1
    (A) list 1 = [ ]
    (B) list 1 = [ ] * 3
    (C) list 1 = [2, 8, 7]
    (D) list 1 = [2, 8, 7] * 3

14. With respect to string operation, the '+' operator _____ the given strings.   1 2 4 1
    (A) Adds
    (B) Concatenates
    (C) Multiples
    (D) Compares

15. We can combine strings and numbers by using the _____ command.   1 1 4 1
    (A) combine ( )
    (B) concat ( )
    (C) cndex ( )
    (D) format ( )

16. In the following statement of python, which ones will result into the output:6?   1 2 4 1
    A =[[1, 2, 3],
        [4, 5, 6],
        [7, 8, 9]]
    (A) A [3] [2]
    (B) A [2] [3]
    (C) A [1] [2]
    (D) A [2] [1]

17. Library used to create data frame is _____.   1 1 5 1
    (A) Sklearn
    (B) Data frame
    (C) Pandas
    (D) Random

18. _____ of the following module is to imported to create series.   1 1 5 1
    (A) Numpy
    (B) Matplotlib
    (C) Pandas
    (D) Random

19. Pandas key data structure is called _____.   1 1 5 1
    (A) Keyframe
    (B) Data frame
    (C) Statistics
    (D) Econometrics

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20. To create sequences of numbers, numpy provides a function _____ analogous to range that returns array instead of lists.
   (A) Arrange   (B) Aspace
   (C) Aline   (D) ARR

           1   2   5   1

PART – B (5 × 8 = 40 Marks)
Answer ALL Questions

		Marks	BL	CO	PO

21. a. Define problem-solving and discuss the six steps involved in it.   8   3   1   1

(OR)

    b. Give an overview of the basic structure of a C program.   8   3   1   1

22. a. Explain about null pointer with example.   8   3   2   1

(OR)

    b. Explain with an example $++i$, $i++$, $--i$ and $i--$.   8   3   2   1

23. a. Write a C program to find the largest of three numbers.   8   3   3   1

(OR)

    b.i. Define getchar ( ) and putchar ( ) function with program.   4   3   3   1

     ii. Define function, actual and formal parameter.   4   3   3   1

24. a. Distinguish between PANDAS with NUMPY using different parameters in python.   8   3   4   1

(OR)

    b. Develop a python program to describe the basic tuple operations.   8   3   4   1

25. a. Explain slicing in arrays using Numpy with examples.   8   3   5   1

(OR)

    b. Write short notes on Keras, TensorFlow, Seaboran and Pybrain.   8   3   5   1

PART – C (1 × 15 = 15 Marks)
Answer ANY ONE Question

		Marks	BL	CO	PO

26. Meena is working on strings. She likes to work on the following string function   15   4   2   1
   (i) String concatenation
   (ii) String comparison
   (iii) String copy
   (iv) String length
   Help her to complete the task with program.

27. What is dictionary? Explain python dictionaries in detail with operations and methods.   15   4   5   1

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