Reg. No.															

B.Tech/ M.Tech (Integrated) DEGREE EXAMINATION, MAY 2024
First & Second 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. _____ of the following is not a characteristic of a good algorithm. (A) Finiteness (B) Determinism (C) Ambiguity (D) Feasibility	1	2	1	1
2. _____ is the output of n for the following expression in C. $n=5-2*7-9;$ (A) –18 (B) 12 (C) 9 (D) 1	1	2	1	1
3. _____ is an algorithm. (A) A step-step procedure to solve a problem (B) A graphical representation of a process (C) A programming language (D) A flowchart symbol	1	1	1	1
4. Find the output for the following printf ("%d", sizeof ("Hello")); (A) 5 (B) 6 (C) 1 (D) 2	1	1	1	1
5. Size of integer pointer and character pointer in C for 16 bit processor is _____. (A) 2 1 (B) 2 2 (C) 4 1 (D) 4 2	1	2	2	1
6. _____ will be the output of the expression 11^5? (A) 12 (B) 13 (C) 10 (D) 11	1	2	2	1
7. An array elements are always stored in _____ memory locations. (A) Sequential (B) Random (C) Sequential and random (D) Intermediate	1	2	2	1
8. _____ is the value of an array element which is not initialized (A) By default zero 0 (B) 1 (C) Depend on storage class (D) 2	1	1	2	1

9. If both the strings are same, a string function strcmp ( ) returns _____. 1 2 3 1
   (A) 1 (B) –1
   (C) 2 (D) 0

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

11. _____ parameter passing mechanism in C creates a copy of the actual parameters. 1 2 3 1
   (A) Call by value (B) Call by reference
   (C) Call by pointer (D) Call by name

12. _____ of the following gives 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

13. _____ is the length of the following list in python. 1 2 4 1
   len (["hello", 2, 4, 6])
   (A) 8 (B) 6
   (C) 4 (D) 3

14. _____ string function converts a character into an integer 1 1 4 1
   (A) len ( ) (B) str ( )
   (C) ord ( ) (D) char ( )

15. Apart from indexing which alternative functions is used to access the pair value? 1 2 4 1
   (A) pair ( ) (B) key ( )
   (C) get ( ) (D) put ( )

16. _____ will be the output of the following code snippet. 1 2 4 1
   print (2**3+(5+6)**(1+1))
   (A) 129 (B) 8
   (C) 121 (D) Error

17. _____ of the following is used to reshape a numpy array 1 2 5 1
   (A) reshape ( ) (B) resize ( )
   (C) Both (A) and (B) (D) size ( )

18. Size attribute in numpy is used to find _____. 1 1 5 1
   (A) Shape (B) Date and time
   (C) Objects (D) Number of items

19. _____ is used when data is in tabular format. 1 1 5 1
   (A) Numpy (B) Pandas
   (C) Matplotlib (D) Random

20. _____ is a high level API built on TensorFlow. 1 1 5 1
   (A) PyBrain (B) Keras
   (C) Scrapy (D) Pandas

PART – B (5 × 8 = 40 Marks)

Answer **ALL** Questions

		Marks	BL	CO	PO
21. a.	Describe about pre-incremental, post-increment, pre-decrement, post-decrement, conditional operators with example.	8	2	1	1
	(OR)				
b.	Explain about different datatypes handled in C.	8	2	1	1
22. a.	Write a C program to read n number of values in an array and display them in reverse order.	8	3	2	1
	(OR)				
b.	Write a C program to find the transpose of matrix.	8	3	2	1
23. a.	Write a C program to find given string is palindrome or not.	8	3	3	1
	(OR)				
b.	Describe function and its types in C and explain recursion function with example.	8	3	3	1
24. a.	Explain the significant features of the pandas and Numpy library.	8	3	4	1
	(OR)				
b.	Write a python program to find the sum of N natural numbers.	8	3	4	1
25. a.	Write short notes pandas querying from data frames.	8	3	5	1
	(OR)				
b.	Explain statistical functions in Numpy.	8	3	5	1

PART – C (1 × 15 = 15 Marks)

Answer **ANY ONE** Question

		Marks	BL	CO	PO
26.	Mr.King is interested to learn strings in C programming. He wants to learn how strings are declared and initialized. Help him by explaining any four string manipulation function with examples.	15	4	3	1
27.	Write a python to check whether the given list is in sorted order or not. If the given list is in sorted order then print true, else print false.	15	4	5	1

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