Reg. No.															

B.Tech/ M.Tech (Integrated) DEGREE EXAMINATION, NOVEMBER 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. What is the output for the following expression in C? n = 5 – 2 * 7 – 9 (A) –18 (B) 12 (C) 9 (D) 1	1	1	1	1
2. _____ of the following is the default storage class for local variables in C programming language. (A) Auto (B) Register (C) Static (D) Extern	1	1	1	1
3. _____ is a flowchart. (A) A programming language (B) A step by step procedure to solve a problem (C) A graphical representation of a process or algorithm (D) A function in a programming language	1	2	1	1
4. Determine the correct output? float c = 3.14; printf ("%f", c%2); (A) 1.0 (B) 0 (C) Compile error (D) 0.14	1	1	1	1
5. _____ flowchart symbol is used to represent a decision point in a process. (A) Rectangle (B) Circle (C) Arrow (D) Diamond	1	2	2	1
6. How do you compare two strings in C? (A) str = = str2 (B) strcmp (str1, str2) (C) strcomp (str1, str2) (D) strcompare (str1, str2)	1	2	2	1
7. _____ is the purpose of a pointer in C. (A) To declare an array (B) To manipulate memory addresses (C) To store an array element (D) To perform arithmetic operations	1	1	2	1

8. In an exit controlled loop the body of the loop is executed at least for _____. 1 2 3 1

(A) 1 time (B) 2 times
(C) 3 times (D) n times

9. The operator used to get value at an address stored in a pointer variable is _____. 1 1 3 1

(A) * (B) &
(C) & & (D) ~

10. _____ does the stable( ) function do in C. 1 1 3 1

(A) Reverse a string (B) Breaks a string into tokens
(C) Compares two strings (D) Cores a string

11. _____ is the function of gets( ) in C. 1 1 3 1

(A) Reads a character (B) Reads a string
(C) Prints a character (D) Prints a string

12. _____ keyword is used to declare character array in C. 1 1 4 1

(A) arr (B) string
(C) arr char (D) char

13. Representation of python tuple is _____. 1 1 4 1

(A) { } (B) {1, 2, 3}
(C) [1, 2, 3] (D) (1, 2, 3)

14. _____ formatted output value is used to print hexadecimal values. 1 1 4 1

(A) % s (B) % o
(C) % h (D) % x

15. _____ arithmetic operators can we not use with strings. 1 1 4 1

(A) – (B) +
(C) * (D) /

16. _____ of the following declarations is incorrect in python language? 1 1 4 1

(A) xyzp = 5,000,000 (B) x y z p = 5000 6000 7000 8000
(C) x–y–z–p = 5,000,000 (D) x,y,z,p = 5000, 6000, 7000, 8000

17. Numpy is often used along with packages like _____. 1 1 5 1

(A) Node.js (B) Matplotlib
(C) Scipy (D) Both (B) and (C)

18. The interface of "Matplotlib" used for data visualization is _____. 1 1 5 1

(A) Seaborn (B) Matlab
(C) Pyplot (D) Pandas

19. To count the total number of elements in a data frame in python, we can use: _____. 1 1 5 1

(A) len (B) count
(C) size (D) values

20.	_____ is the default data type of numpy arrays. (A) int 32 (B) float 64 (C) object (D) char 32	1	1	5	1

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

		Marks	BL	CO	PO
21. a.	Describe various storage classes in C programming with suitable example.	8	2	1	2
	(OR)				
b.	Mention flowchart, and discuss the symbols/ shapes used commonly.	8	2	1	2
22. a.	Explain about void pointer with example.	8	3	2	2
	(OR)				
b.	Write a program to find the factorial of a given number.	8	3	2	2
23. a.	Draw flowchart and write a C program to convert temperature given in Celsius to Fahrenheit.	8	3	3	2
	(OR)				
b.	Illustrate the concepts of call by value function with suitable program.	8	3	3	2
24. a.	Describe about the different types of data structures in python.	8	3	4	2
	(OR)				
b.	Explain for loop with example using manage function.	8	3	4	4
25. a.	Elaborate the basic operations performed on PANDAS data frame.	8	3	5	4
	(OR)				
b.	Explain percentile in Numpy.	8	3	5	4

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

		Marks	BL	CO	PO
26.i.	Explain the input and output statement in C programming with examples.	8	3	1	4
ii.	Illustrate the scope of the variable with examples.	7	3	1	4
27.	Write a python program to design simple calculator performing arithmetic functions like addition, subtraction, multiplication and division with your input.	15	3	5	4

* * * * *