2023/FYUG/ODD/SEM/
CADSM-101T/153

FYUG Odd Semester Exam., 2023
(Held in 2024)

COMPUTER APPLICATION

(1st Semester)

Course No. : CADSM-101T

(Programming with C)

Full Marks : 70
Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

SECTION—A

Answer *ten* questions, selecting any *two* from each Unit : 2×10=20

UNIT—I

1. What is variable? How do you declare a variable in C?

2. Explain if else statement with a flowchart.

3. State the differences between i++ and ++i.

UNIT—II

4. What do you mean by function prototype? Give example.

5. Write down the benefits of using function.

6. What are actual arguments and formal arguments? Give example.

UNIT—III

7. What is pointer? How do you declare a pointer variable?

8. Explain with an example pointers to pointers.

9. Define array. How do you initialize an one-dimensional array?

UNIT—IV

10. Define user-defined data type with example.

11. Explain self-referential structure.

12. What are the differences between array and structure?

UNIT—V

13. Define C processor.

14. What do you mean by formatted output? Give example.

15. Write the importance of file programming.

SECTION—B

Answer *five* questions, selecting *one* from each Unit : 10×5=50

UNIT—I

16. *(a)* Discuss the structure of a C program. 5

(b) With a code segment differentiate 'while loop' and 'do-while loop'. 5

17. What do you mean by operator? Discuss the various types of operators available in C. 2+8=10

UNIT—II

18. Define storage classes in C. Discuss the following storage classes : 2+8=10

(a) Automatic

(b) External

(c) Static

(d) Register

19. How does recursion differ from iteration? Also write the coding for 'calculation of factorial of an integer number'—

(a) using iteration;

(b) using recursion. 2+4+4=10

UNIT—III

20. (a) Write a C program to find the smallest and largest of n numbers. 5

(b) What is string? Write the purpose of null string in C. 1+2=3

(c) How do you declare 2D array? 2

21. (a) If $a = 3$ and its address is 1000, then what are the values of (&a) and *(&a)? 2

(b) What do you mean by command line argument? Give an example. 2

(c) Write a C program to calculate the sum and average of n numbers using their pointers. 6

UNIT—IV

22. (a) With a program, show the process of passing a structure to a function. 6

(Continued)

(b) Define the following in connection with structure : 1+1+1+1=4

(i) tag

(ii) member

(iii) dot (·) operator

(iv) struct keyword

23. (a) Define a structure namely student with the following fields : 7

(i) Student name

(ii) Roll number

(iii) Address

(iv) Phone number

Read at least 10 students details and then display these on the output screen.

(b) What is union? Write the properties of union. 1+2=3

UNIT—V

24. (a) Write a C program to copy the contents of one file into another. 6

(b) What is macro? How does it differ from a function? 1+3=4

25. *(a)* Discuss the various functions available for file operations. 8

(b) What is library function? Give example. 2

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