

**2024/FYUG/ODD/SEM/
CSCDSM-101T/136**

FYUG Odd Semester Exam., 2024

COMPUTER SCIENCE

(1st Semester)

Course No. : CSCDSM-101T

(Programming with C)

Full Marks : 70

Pass Marks : 28

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

UNIT--I

1. Answer any *two* of the following : 2×2=4
 - (a) What is variable? How do you declare a variable in C?
 - (b) What are primitive data types in C? Give example.
 - (c) Define token. Give example.

2. Answer any *one* of the following : 10
 - (a) Explain 'while', 'do-while' and 'for' loops with suitable examples. What is the difference between while and do-while loops? 8+2=10
 - (b) Write short notes on the following : 2×5=10
 - (i) Switch statement
 - (ii) GOTO statement
 - (iii) Continue statement

- (iv) Nested loop
(v) IF-ELSE ladder

UNIT—II

3. Answer any *two* of the following : $2 \times 2 = 4$
- (a) Write down the difference between built-in function and library function.
- (b) What is function definition? Give example.
- (c) Write down the advantages of recursion.
4. Answer any *one* of the following : 10
- (a) (i) Write a C program to calculate factorial using function. 7
(ii) Define storage classes in C. 3
- (b) (i) Explain function with argument and returning value. Give example. 4
(ii) What are scopes of variables? Give example. 3
(iii) Write down the difference between iteration and recursion. 3

UNIT—III

5. Answer any *two* of the following : $2 \times 2 = 4$
- (a) Define pointer. How do you declare a pointer variable?
- (b) What is the purpose of 'address-of' and 'value at address' operator?
- (c) Write how to initialize pointer arrays. Give example.

6. Answer any *one* of the following : 10
- (a) (i) What is string? Write the purpose of null string in C. $2 + 2 = 4$
(ii) How are 1D array and 2D array declared and initialized in C? Give syntax. $2 + 2 = 4$
(iii) What are command line arguments in C? 2
- (b) (i) Write a C program to find the smallest and the largest of 'n' numbers. 5
(ii) Write a C program to calculate the sum and average of 'n' numbers using pointers. 5

UNIT—IV

7. Answer any *two* of the following : $2 \times 2 = 4$
- (a) Write down the use of user-defined data type.
- (b) Define self-referential structure.
- (c) Write down the difference between array and structure.
8. Answer any *one* of the following : 10
- (a) (i) Write a program to show the process of passing a structure to a function. 6
(ii) Define the following in connection with structure : $1 \times 4 = 4$
tag; member; dot (.) operator; struct keyword.

- (b) (i) Explain the difference between structure and union. 4
- (ii) Write a C program to define a structure named 'student' with the fields Student name, Roll number, Address and Phone number. Read at least 5 students' details and then display these on the output screen. 6

UNIT—V

9. Answer any *two* of the following : $2 \times 2 = 4$
- (a) Define C preprocessor.
- (b) What do you mean by formatted output? Give example.
- (c) Write how to create a data file. Give example.
10. Answer any *one* of the following : 10
- (a) (i) Write a C program to copy the contents of one file to another. 6
- (ii) What is macro? How does it differ from a function? $1+3=4$
- (b) (i) Discuss the various functions available for file operations. 8
- (ii) What is library function? Give example. 2

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