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## First Semester B.Sc./B.C.A. Degree Examination, August 2021 Career Related First Degree Programme under CBCSS Computer Science/Computer Applications Core Course CS 1141/CP 1141 : INTRODUCTION TO PROGRAMMING (2020 Admission Regular)

Time: 3 Hours

Max. Marks: 80

SECTION - A (Very short answer type)

One word to maximum of two sentence. Answer all questions.

- 1. Define algorithm.
- 2. What is an object code?
- 3. What is the storage capacity of integer data type?
- 4. Which are simple I/O statements?
- 5. What is an exit control loop?
- 6. Define pointer array.
- 7. What is recursion?
- 8. What do \* and & operator mean?
- 9. What are the steps to write a function in a program?
- 10. What is format specifier?

 $(10 \times 1 = 10 \text{ Marks})$ 

## SECTION - B (Short Answer)

Not to exceed one paragraph, answer any eight questions. Each question carries 2 marks.

- # 11. Classify the different types of decision making statements.
- √12. Why do we use header files? ✓
- √ 13. Write and explain Syntax of a function definition. ✓
- √14. Define pointer. How can we declare it? ✓
  - 15. Display string "corona" in reverse order.
  - 16. Define structure. How to initialize a structure?
- √ 17. What are different file operations?
- $\checkmark$  18. Write a C program to swap two numbers using function.  $\checkmark$ 
  - 19. Give the general syntax of conditional operator with example.
  - 20. Explain escape sequence character in C.
- √ 21. What is multidimensional array?
  - 22. Explain macros.
- √23. Write a program to find the sum of first n natural numbers.
  - 24. What do you mean by identifiers and literals?
- √25. Explain break and continue statement. ✓
- √ 26. What is meant by dynamic memory allocation?

 $(8 \times 2 = 16 \text{ Marks})$ 

## SECTION - C (Short Essay)

Not to exceed 120 words, answer any six questions. Each question carries 4 marks.

- 27. Explain the structure of a C program.
- 28. What are storage classes? Explain.
- 29. Write the algorithm, flowchart and the C program to find the largest among three numbers.  $\checkmark$
- 30. Explain with example about a function with return type and arguments.
- 31. Explain the following with example.
  - (a) fprintf
  - (b) printf
  - (c) fscanf
  - (d) scanf
- 32. Write a C program to print the Fibonacci series using recursion.
- 33. Write a short note on precedence of operators and order of evaluation of expressions.
- 34. Explain symbolic constants used in C.
- 35. Write a C program to read and print the array of elements using pointers.
- 36. Explain the difference between post increment and pre increment operators with example.
- 37. Explain nested for loop with example.
- 38. Write a C program to find the transpose of a matrix.

 $(6 \times 4 = 24 \text{ Marks})$ 

## SECTION - D (Long Essay)

Answer any two questions. Each question carries 15 marks.

- 39. What is array? Write a Program to read n numbers into an array and find the
  - (a) Sum of odd numbers
  - (b) Sum of even numbers
  - (c) Average of all numbers
- 40. What are different data types in C? Explain in detail with example.
- 41. (a) Write and explain about switch statement.
  - (b) Write a program to perform arithmetic operation using switch.
- 42. Distinguish between the following. With example:
  - (a) Actual and formal arguments
  - (b) Global and local variables
  - (c) Call by value call by reference
- 43. Define 'union'. Give the syntax. List out the difference between union, structure and arrays with example.
- 44. (a) Write a program to display the contents of the file in reverse order.
  - (b) Write a program to copy the contents from one file to another file.

 $(2 \times 15 = 30 \text{ Marks})$