

D 43202

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Name.....

Reg. No.....

**SECOND SEMESTER B.C.A. DEGREE EXAMINATION, MAY 2018**

(CUCBCSS—UG)

Core Course

BCA 2B 02—PROBLEM SOLVING USING—C

(2017 Admissions)

Time : Three Hours

Maximum : 80 Marks

**Part A**

*Write short answer on all questions.  
Each question carries 1 mark.*

1. What are identifiers ?
2. What is the use of symbolic constant ?
3. List the different logical operators in C.
4. Which is the conditional operator in C ?
5. What are the different uses of an operator coma ?
6. Which statement used for skipping of loop in C ?
7. Mention the string function to concatenate two strings.
8. What are arrays ?
9. What are pointers ?
10. How to close a data file in C ?

(10 × 1 = 10 marks)

**Part B**

*Write a paragraph on all questions.  
Each question carries 2 marks.*

11. What is a variable ? Rules for defining variables and how to declaring and initialization of variables in C.
12. Explain else-if ladder with suitable example.
13. Write a program to check whether given number is divisible by 9 or not.
14. Discuss the limitations of using getch() and scanf() functions for reading strings ?
15. Differentiate structure and union ?
16. Define user defined function. Explain with example.

Turn over

17. Explain the use and syntax of nested loop.
18. What is the purpose of malloc() function ? Explain.

(8 × 2 = 16 marks)

### Part C

Write short essay on any **six** questions.  
Each question carries 4 marks.

19. Differentiate between local and global variables with examples.
20. Write a program to find the factorial of a number using recursion.
21. Explain the different looping statements in C.
22. Write a program to find largest and second largest element in an array.
23. How arrays are passed to a function ? Explain with example
24. Explain with example, various arithmetic operations on pointers.
25. Write a C program to find the sum of the even and odd digits of a given numbers.
26. Explain the concept of array of structures. Write a program to add one second to a time given in the format hh:mm:ss using structure.
27. When is a switch statement better than multiple if statements ?

(6 × 4 = 24 marks)

### Part D

Write essays on any **three** questions.  
Each question carries 10 marks.

28. (a) What are constants? How are they classified ? Explain. (4 marks)
- (b) Write a program to concatenate two strings without using library functions. (6 marks)
29. (a) Define character array. What is the use of character arrays ? (5 marks)
- (b) Write a program to find the sum of two matrices using user defined functions ? Pass arguments. (5 marks)
30. (a) Write a C program to perform simple arithmetic calculation nested if. (6 marks)
- (b) What do you mean by precedence of operators ? Explain with example. (4 marks)
31. What are the different categories of function with suitable examples ?
32. (a) Explain the concept of pointers and structures with suitable example (5 marks)
- (b) Write C program to search a number in an array and display its position. (5 marks)

(3 × 10 = 30 marks)