

**SECOND SEMESTER (CUCBCSS-UG) DEGREE EXAMINATION, MAY 2019**

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 is the significance of stdio.h ?
2. Define what is character sets.
3. Define what are the different types of constants ?
4. Explain conditional operators.
5. Define the difference between single character and string character.
3. Define the use of getchar () function.
7. What would the value of X in the expression after execution :  $X += 20$  ? Assuming the value of X is 3.
8. What is a multidimensional array ?
9. What is recursive function ?
10. What are the invalid pointer arithmetic ?

(10 x 1 = 10 marks)

Part B

*Write a paragraph on all questions.*

*Each question carries 2 marks.*

11. Explain. What are the rules for forming an identifier in C ?
12. Explain nesting of for loop with suitable example.
13. Write a program to find average of odd digits from an integer number using while loop.
14. What is the difference between  $j++$  and  $++j$  ? Explain with example.
15. What is file ? What is its need ?

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16. What is pointer ? How it is declared and accesses in C language ?
17. Explain what are the different type conversions in expressions.
18. What is operator precedence and associativity ? Explain.

(8 x 2 = 16 marks)

### Part C

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

19. What are various jumping statements ? Explain each.
20. Explain the different format type specifications used in input output statements.
21. How do you declare a one dimensional array ? How do you pass an array as an argument to a function using a Call by Reference method ?
22. Write a C program to find the average of non-negative from a list of numbers using continue statement and do not use array.
23. What is meant, by call by value ? Explain how it is different from call by reference. Write C language program to support your answer.
24. Write a program to find sum of series  $s$  up to  $n$  series.
25. What is a character array ? Explain. Write a program to find vowels from a line of text. Do not use any library functions.
26. Explain how the structure variable is passed as a parameter to a function with example.
27. Explain creating a data file also opening and closing a file with example.

(6 x 4 = 24 marks)

### Part D

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

28. (a) What are the different data types used in C ? Explain each. (6 marks;  
(b) Write C program to insert an element anywhere in the array. (4 marks)
29. (a) What are the different operators used in C ? Explain each with example. (7 marks  
(b) Write a program to find largest and second largest element in an array. (3 marks)
30. (a) What are structure and unions ? How a structure is created and referenced ? Illustrate. (6 marks)  
(b) Write a program to count the number of words in a given line of text) Without using library functions. (4 marks)

(3 x 10 = 30 marks]