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 ?

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

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 getchar() 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)