

2020

BCA

1st Semester Examination

PROGRAMMING IN C

PAPER—1102

Full Marks : 100

Time : 3 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

1. Answer any one question. 10×1
- (a) What are header files? Why are they important? Can we write a C program without using any header file? 4+4+2
- (b) Differentiate between typecasting and type conversion. Explain the utility of #define and #include statements. 4+3+3

(Turn Over)

- (c) In which situation will you prefer to use for, while and do-while loops. Explain with proper example. 3+3+4

2. Answer any *three* questions. 20×3

- (a) Explain the importance of a switch case statement. In which situations is a switch case desirable? Also give its limitations. Write a program to read month of the year as integer. Then display the name of the month. 3+3+2+12

- (b) What is the difference between declaration and definition? Write a short note on basic data types that the C language supports. Write a program to read a 5 digit number and then display the number in the following format. For example, if the user entered 54321, the result should be,

54321	5	
4321	54	
321	543	
21	5432	
1	54321	3+5+12

- (c) How are multidimensional arrays useful? What happen when an array is initialized with more initializers as compared to its size? Why do we need signed and unsigned int? Write a C program to count total number of non zero elements in a two dimensional array. 3+4+3+10

- (d) Write a C program to calculate the number of duplicate entries in the array. Differentiate between formal parameters and actual parameters? Differentiate between call by value and call by reference with suitable example. 12+3+5
- (e) How many types of storage classes C language supports? Why do we need different types of such classes? Explain each of them with example. Write a program to read an array of 10 floating point numbers. Display the smallest number and its position into the array. 2+2+8+8
- (f) Explain the difference between the null pointer and void pointer? What is an array of pointers? How is it different from a pointer to an array? How are pointers used on two-dimensional array? Write a program to print all odd numbers from 100 to 200. 3+2+2+4+9
- (g) Write a program to check whether a given string is palindrome or not without using `strrev()`. Define pointer to function with an example. Differentiate between (i) Structure and Pointer. (ii) long int and int. 9+4+4+3

[Internal Assessment : 30]
