বিদ্যাসাগর বিশ্ববিদ্যালয়

VIDYASAGAR UNIVERSITY

BCA

1st Semester Examination 2021

PROGRAMMING IN C

PAPER—1102

Full Marks : 70

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.

Group – A

Answer any *four* questions.　　　　　　　　4×15

1. (a) Explain entry-controlled loop and exit-controlled loop with an example.
   　　　　　　　　7

   (b) What is a function ? Explain with an example.　　　3

   (c) Write a C program to compute factorial of a given number using recursion.　　　5

2. (a) Write a C program using pointers to find the length of a character string. 5

(b) What is array of pointers? Explain with an example in C language. 5

(c) Explain enumerated types in C language with examples. 5

3. (a) What is call by value? How it is different from call by reference? 2+3

(b) Write and explain 'C' language program to implement the concept of call by value and call by reference. 5

(c) What are header files? What is need of header files in 'C' programming? 2+3

4. (a) What are storage classes? Explain. 5

(b) What is Structure? How it is different from union? 2+3

(c) Write a C program that illustrates the arithmetic expressions using menu driven program. 5

5. (a) Write a C program to add two dimentional array. 5

(b) Explain the meaning of the declaration xp (inta); 5

(c) What is the difference between local and static variable. 5

6. (a) Write C program to sort a list of student records according to marks using structure. 8

(b) What are break and continue statement ? Explain with examples.

3+4

7. Write short note on these following topics (any *three*) : 3×5

(a) Bitwise operator.

(b) Dynamic memory Allocation.

(c) Command line argument.

(d) Union.

8. (a) What is conditional operator ? Find the highest of 3 numbers using it. 2+5

(b) What is macro ? Differentiate macro and symbolic constant. 2+3

(c) Define f(x) = $3x^2 - 5 \cos (x) + 1$ using macro. 3

Group – B

Answer any *one* question. 1×10

9. (a) Define user define function.

(b) What is debugging and why is it important ?

(c) Explain keywords in C with example.

(d) Differentiate between constants and variables. 2+3+2+3

10. (a) Discuss the need of flowchart.

(b) What is register variable.

(c) What are the benefits of array ?

(d) What is file pointer ?   3+2+2+3

(Internal Assessment : 30)

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