Code : 303106

BCA 1st Semester Exam., 2022

PROBLEM SOLVING AND PROGRAMMING CONCEPTS

Time : 3 hours   Full Marks : 60

Instructions :

(i) *The marks are indicated in the right-hand margin.*

(ii) *There are* **SEVEN** *questions in this paper.*

(iii) *Attempt* **FIVE** *questions in all.*

(iv) *Question Nos.* **1 & 2** *are compulsory.*

1. Answer any *six* questions of the following :
                                        2×6=12

   (a) What is the purpose of format specifier?

   (b) What *sizeof()* operator will do?

   (c) What is the purpose of adding comments in a program?

   (d) What is the purpose of *goto* statement?

   (e) What is the difference between *exit* and *return* statement?

   (f) What is the basic idea of flowchart?

   (g) What is recursion?

   (h) What is self-referential structure?

   (i) What is the use of bio-informatics?

   (j) Write how to define e-commerce.

2. Answer any *three* of the following :   4×3=12

   (a) What is an algorithm? Write an algorithm to find the factorial of N number.

   (b) Write a short note on C-Data types.

   (c) Classify the different types of decision-making statements.

   (d) Distinguish between actual and formal parameters with an example.

   (e) Write about sequential file handling functions.

3. What is the role of function? Describe the difference between call by value and call by reference with a proper example.   12

4. What is the difference between searching and sorting? Explain insertion sort technique with an example.   12

5. Discuss the relationship between bio-informatics and medical applications. 12

6. List and explain loop control (or) iteration statements in C. 12

7. Write how to declare and initialize a two-dimensional array. Write a C program to multiply two matrices of different order. 12

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