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1704

B.C.A. FIRST YEAR EXAMINATION, 2019
PRINCIPLES OF PROGRAMMING LANGUAGE
(THROUGH 'C')

Time: Three Hours

Maximum Marks: 100

Answer of all the questions (short answer as well as descriptive) are to be given in the main answer-book only. Answers of short answer type questions must be given in sequential order. Similarly, all the parts of one question of descriptive part should be answered at one place in the answer-book. One complete question should not be answered at different places in the answer-book. Write your roll numbers on question paper before start writing answers of questions.

Question paper consists of three parts.

All THREE parts are compulsory.

PART – A   [Marks: 20]

(Very Short Answer)

Consists 10 question of **two marks** each.

Maximum limit for each question is up to **40** words.

PART – B   [Marks: 20]

(Short Answer)

Consists 5 question of **four marks** each.

Maximum limit for each question is up to **80** words.

PART – C   [Marks: 60]

(Long Answer)

Consists 5 question of **twelve marks** each with internal choice.

PART – A

Q.1 (i) What is the description for syntax errors? [2]

(ii) What is the process to create increment and decrement statement in C? [2]

(iii) What are reserved word with a Programming Language? [2]

(iv) Describe Static function with its usage? [2]

(v) What is a nested loop? [2]

(vi) What is the difference between actual and formal parameters? [2]

(vii) Does a break is required by default case in switch statement? [2]

(viii) Define an Array? [2]

(ix) What is Typecasting? [2]

(x) What is Recursion? [2]

PART – B

Q.2 Attempt all questions -

(i) What is a Flow chart? Describe its various symbols. [4]

(ii) Discuss various data types in C with example. [4]

(iii) Write a C program to find the highest number among N numbers in an array. [4]

(iv) What is meant by scope, visibility and life time of variables? Write a C program

to explain the pointers and arrays. [4]

(v) Differentiate between Structure and Union with examples. [4]

PART – C

Q.3 Write short notes on -

    (i)   Algorithms   [5]

    (ii)   Language Evaluation Criteria and Language Categories.   [7]

OR

    (i)   Discuss basic concept of Programming Languages.   [6]

    (ii)   Write a note on Syntax and Semantics formal methods.   [6]

Q.4 Discuss various types of operators in C with examples.   [12]

OR

    (i)   Write a program to explain the concept of switch statement.   [6]

    (ii)   Write a note on History and importance of C.   [6]

Q.5 (i)   Differentiate between while and do – while loop with example.   [7]

    (ii)   Write a note on string handling functions.   [5]

OR

    (i)   Write a C program to multiply two matrices.   [8]

    (ii)   Explain break and continue statement.   [4]

Q.6 Write short notes on -

    (i)   Need and elements for user defined functions   [6]

    (ii)   Pointers and Functions   [6]

OR

(i)   Discuss function calls and declaration with examples.   [6]

(ii) How a variable is accessed through its pointer? Discuss with a C program.   [6]

Q.7 Discuss various file handling methods in C.   [12]

OR

Write short notes on -

(i)   Array of structures   [4]

(ii) Union   [4]

(iii) Formatted and Un – formatted I/O   [4]