This question paper contains 3 printed pages] Roll No. 275227

Sl.No. 1805

134

B.C.A. (Part - I)

B.C.A. (Part - I) EXAMINATION, 2017
(Faculty of Science)
(Three - Year Scheme of 10 +2 + 3 Pattern)
Paper - 134
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.

PART - I: ***(Very Short Answer) consists of 10 questions of 2 marks each. Maximum limit for each question is up to 40 words.***

PART - II: ***(Short answer) consists of 5 questions of 4 marks each. Maximum limit for each question is up to 80 words.***

PART - III: ***(Long answer) consists of 5 questions of 12 marks each with internal choice.***

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PART - I

Attempt all Questions

Each questions carries 2 marks **[10 × 2 = 20]**

1. a) What is algorithm?
   b) Give flow chart symbols for I/O, processing terminal and flow lines.
   c) How do we create constants in 'C'? Give syntax.
   d) What are local variables?
   e) Discuss purpose and syntax of goto statement.
   f) How do we read and write strings in 'C' Explain.
   g) What are formal parameters?

h) Define pointers.

i) How do we create structures in 'C'? Explain.

j) Differentiate between fprintf ( ) and printf( ).

PART - II

Attempt all questions

Each questions carries 4 marks [5 × 4 = 20]

2. a) Draw a flow chart to find out sum and average of any 3 nos.

b) Discuss any 2 (two) data types of 'C' with suitable examples.

c) Differentiate between break and continue statements with the help of appropriate example(s).

d) Differentiate between call by value and call by reference.

e) Discuss the purpose of following functions:

i) putch ( )

ii) puts ( )

iii) putchar ( )

iv) scanf ( )

PART - III

3. Discuss machine level, Assembly and high level languages is detail. [12]

OR

Write pseudocodes to find out:

a) factorial of a given no.

b) sum of 1st 10 natural no's. [6 + 6 = 12]

4. Discuss the various operators of 'C'. [12]

OR

Write a program in 'C' to findout grade of a student based on the following criterias:

a) Percentage is < = 40; grade is 'D'.

b) Percentage is > = 40 but < 50; grade is 'C'.

c) Percentage is > = 50 but < 60; grade is 'B'.

d) Percentage is > = 60 but < 75 ; grade is 'A'.

e) Percentage is > = 75 grade is 'A+'.

5. Explain the following functions:
   a) strcat ( )
   b) strcmp ( )
   c) strcmpi ( )
   d) strlen ( )
   e) strstr ( )
   f) strchr( )

[6 × 2 =12]

OR

Discuss single Dimensional and double Dimensional arrays of 'C' in breif. [12]

6. What is recursion? Why do we use recursion? Explain Also write a code to print fibonacci series with recursive function. [12]

OR

Write a 'C' program that uses of function to search a no with in an array. [12]

7. Explain the following:
   a) File modes.
   b) Steps of file handling in 'C'.
   c) Stream I/O model.

[3 × 4 = 12]

OR

Create a structure containing five members : rollno, name - of- student, marks1, marks2 & marks3. Write a program to access those members using structure variable or pointer. [12]