Programming Fundamentals Through "C" Language-103

Sem-I (Syll-Dec-2015)

Time:- 3hrs M.M.- 75

Note: - The Candidates are required at attempt one question each from Section A,B,C and D carrying 15 Marks and the entire Section E consisting of 08 short answer type questions carrying one or two marks each.

Section-A

1.(a) Explain the programming process in detail with the involved steps. (7.5)

(b) Explain the concept of type conversion with illustrative examples. (7.5)

2. What are the rules for the expression evaluation in 'c' language? Write an equivalent of the following expression in 'c': (15)

X = -b+sqrt (b^2-4ac)/2a

Also explain the order of evaluation.

Section-B

3.(a) What are the major differences between recursion and iteration? Which is better of the two and why? Justify your answer with a suitable example. (10)

(b) What are the uses of static variables? Explain. (5)

4.(a) Explain various decision making statements in C. (10)

(b) Explain with examples where a 'for' loop is suitable and where a 'do-while' loop is suitable (5)

Section-C

5.(a) Write a program to reverse the elements of an array. (10)

(b) What are the operations that can be performed on pointers? (5)

6.(a) What are the various uses of pointers? Explain with suitable examples. (10)

(b) Explain the pointer assignment. (5)

Section-D

7.(a) What is a structure? How can you declare a structure and access its data members? Explain with an example. (7.5)

(b) What is a file? Explain how the file open and file close functions. (7.5)

8.(a) Distinguish between structure and union through an example. (5)

(b) What are self referential structures? Explain. (5)

(c) What are random access files? How a particular record is accessed in such a file? (5)

Section-E

9(a) What is a character constant? What is the maximum number of character which variable type 'char' may hold? (2)

(b) What value is stored in a pointer? (2)

(c) What are structures? How does a structure differ from an array? (2)

(d) What are unions? What is their advantage? (2)

(e) What are pointers? (2)

(f) What are nested loops? (2)

(g) Can we pass function to other functions? If yes how. (2)

(h) How can we pass pointers to a function? (1)