Save trees use e-Question Paper Go green
DOWNLOAD THIS FREE AT www.vturesource.com

CBCS SCHEME

USN | | | | | | | | | | 17PCD13/23

First/Second Semester B.E. Degree Examination, June/July 2018

Programming in C and Data Structures

Time: 3 hrs. Max. Marks: 100

Note: ***Answer any FIVE full questions, choosing one full question from each module.***

Module-1

1 a. Write basic structure of C program and explain its different sections. **(08 Marks)**
b. What are the rules to be followed to declare an identifier with example? **(04 Marks)**
c. Write a note on different types of Type conversions, with an example/program for each. **(08 Marks)**

OR

2 a. Define C – tokens. List and explain different C – tokens. **(08 Marks)**
b. Write a C program to convert number of days into months and days. (Hint : Assume a month has 30 days) (For e.g. 45 days = 1 month and 15 days). **(04 Marks)**
c. Write a note on Operator precedence and Associativity. **(08 Marks)**

Module-2

3 a. An Electric power distribution company charges its domestic consumers as follows :

Consumption Units	Rate of charge
0 - 200	Rs 0.50 per units
201 - 400	Rs 100 + Rs 0.65 per unit excess of 200
401 - 600	Rs 230 + Rs 0.80 per unit excess of 400
601 - above	Rs 390 + Rs 1.00 per unit excess of 600

Write a C program to compute and print amount to be paid by the customer. **(08 Marks)**
b. Write the Syntax of different looping control constructs and explain their working. **(08 Marks)**
c. Distinguish between the following :
i) goto and if ii) break and continue. **(04 Marks)**

OR

4 a. Write the Syntax of nested if …else statement and explain its working. **(08 Marks)**
b. Write a C program to convert a decimal number to binary form. **(08 Marks)**
c. Differentiate between do…while loop and while loop, with the help of Syntax. **(04 Marks)**

Module-3

5 a. Write a C program to search a key integer element in the given array of N elements using binary search technique. Print the output with suitable headings. **(08 Marks)**
b. Distinguish between the following types of variables :
i) Automatic ii) Global iii) Static iv) Register. **(08 Marks)**
c. Explain the importance of strcmp ( ) and strcat ( ) string manipulation functions. **(04 Marks)**

OR

6 a. Write the Syntax and give an example for each : **(08 Marks)**
i) Declaration of One – dimensional array ii) Initialization of One – dimensional array
iii) Declaration of Two – dimensional array iv) Initialization of Two – dimensional array.

ALL BRANCHES | ALL SEMESTERS | NOTES | QUESTON PAPERS | LAB MANUALS
A Vturesource Go Green initiative

Save trees use e-Question Paper Go green
DOWNLOAD THIS FREE AT www.vturesource.com

b. Write a C program to find n^{th} term of Fibonacci series using recursion. **(08 Marks)**
c. Write a C program to find length of a string without using strlen( ) function. **(04 Marks)**

Module-4

7 a. Write a note on the following with an example for each : **(08 Marks)**
i) Arrays of structures ii) Arrays within structures iii) Structures within structures.
b. Write a C program to count the number of characters, Number of lines and number of white spaces from a file. **(08 Marks)**
c. Create structure st_record having members student Name (Sname) and student marks (Smarks). Write a C program which reads name and marks of two students and compare whether both students are same. **(04 Marks)**

OR

8 a. Mention importance of the following input/output file operations along with Syntax and example for each : **(08 Marks)**
i) fscanf ( ) ii) fprintf ( ) iii) fopen ( ) iv) fclose ( ).
b. Create a structure st _ record having members to store name of student, marks scored in three different subjects. Create a user defined function cal-average ( ) to compute average marks scored by the student. Write a C program which reads details of a student and prints whether a student is pass or fail. **(08 Marks)**
c. Mention syntax and give an example for the following :
i) Structure definition ii) Structure variable declaration. **(04 Marks)**

Module-5

9 a. Write Syntax and give an example of function declaration of the following :
i) malloc ( ) ii) calloc ( ) iii) realloc ( ) iv) free ( ). **(08 Marks)**
b. Write a note on categories of pre – processor directives. **(08 Marks)**
c. List two disadvantages of : i) Arrays ii) Linked lists. **(04 Marks)**

OR

10 a. Write a note on the following data structures :
i) Linked list ii) Stack. **(08 Marks)**
b. Write a C program which copies contents of a string to another using pointer as function parameter. Print copied string. **(08 Marks)**
c. Mention significance of compiler control Pre – processor directives. **(04 Marks)**

* * * * *

www.vturesource.com
ALL BRANCHES | ALL SEMESTERS | NOTES | QUESTON PAPERS | LAB MANUALS
A Vturesource Go Green initiative