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Code No. : 11011C SP

VASAVI COLLEGE OF ENGINEERING *(Autonomous)*, HYDERABAD
B.E. I Year I-Semester Special Examination, September-2017
Programming in C and Problem Solving

Time: 3 hours   Max. Marks: 50

*Note: Answer **ALL** questions in **Part-A** and any **FIVE** from **Part-B***

Part-A (15 Marks)

1. Differentiate between compiler and assembler.   [1]
2. What is meant by entry control loop and exit control loop?   [1]
3. Define recursion.   [1]
4. Explain the relationship between an array and a pointer.   [1]
5. Write a note on enumeration constants.   [1]
6. State the order of evaluation of the operators in the following C statement and show the   [2]
   value of x after statement is performed x=7+3*6/2-1;
7. What are the differences between break and continue statements in C language.   [2]
8. Create a macro function to find square of a number.   [2]
9. Write a C program to find the length of a given string without using strlen() function. [2]
10. Differentiate between structure and union.   [2]

Part-B (5 × 7 = 35 Marks)

11. a) Give the structure of C program and explain the process of execution of C program.   [4]
    b) Draw the flow chart for finding the greatest of four numbers.   [3]

12. a) Give the selection process of the switch statement and explain switch case statement   [4]
       with syntax. What are the advantages of switch statement over if statement in C?
    b) Write a C program to find the sum of the following series   [3]
       $1^2+2^2+3^2+\ldots\ldots+N^2$

13. a) What are preprocessor commands? Explain with examples.   [4]
    b) Write a C program to arrange the elements of an integer array in descending order using   [3]
       Selection sort technique.

14. a) How is an array passed to a function? Explain with an example.   [4]
    b) Write a C program which reads a string and print "YES" if all the characters are same   [3]
       otherwise print "NO".

15. a) Explain arrays of structures with suitable examples.   [4]
    b) Write a C program to store the list of customer names and their telephone numbers in a   [3]
       structure and display them.

16. a) What are the different types of computer languages? List examples of each type.   [3]
    b) Discuss in detail about various operators in C language.   [4]

17. Answer any *two* of the following:
    a) What are the advantages of recursion? Explain with an example.   [3½]
    b) What are string manipulation functions in C? Explain with examples.   [3½]
    c) Write a C program to read the marks of n students in a subject and store them in a file. [3½]

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