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Code No. : 31014

VASAVI COLLEGE OF ENGINEERING (*Autonomous*), HYDERABAD
M.C.A. (CBCS) I-Semester Main Examinations, January-2018

Problem Solving and Programming in C

Time: 3 hours

Max. Marks: 60

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

Part-A ($10 \times 2 = 20$ Marks)

1. Draw all the notations of a Flow chart and write its purpose.
2. What is meant by an explicit type conversion?
3. Write the syntax of while loop.
4. Differentiate between local and global variables in C language.
5. What is Nested function?
6. List out the advantages of Arrays.
7. Write about Array of Pointers with example.
8. Write the syntax and example for string handling function strlen().
9. Define a structure. How are the structure members accessed?
10. What are the I/O functions used to read the contents from a file?

Part-B ($5 \times 8 = 40$ Marks)

(All sub-questions carry equal marks)

11. a) Convert given binary number $(101001)_2$ in to equivalent octal number system.
b) Explain about the Bitwise Operators in C Language.
12. a) What are various storage classes used in C Language? Explain with suitable examples.
b) Differentiate between Call by Value and Call by reference mechanisms of functions in C programming.
13. a) How are one-dimensional Arrays declared and defined? Explain with suitable examples.
b) Write a C Program for sorting the given list of elements using selection sort.
15 34 1 69 8 80 24 12 5
14. a) What are the advantages of pointers in Inter Function Communication?
b) How are Arrays passed as arguments to a function? Explain with a suitable program.
15. a) What are the advantages of self-referential structures? Explain with an example.
b) Write a C program to copy the contents of one file to another file.
16. a) Draw a flow chart to find whether given number is Armstrong or not.
b) Enumerate the importance of break and continue statements in C Programming.
17. Answer any *two* of the following:
 - a) Write a C program to demonstrate the use of two-dimensional Arrays.
 - b) Explain about Pointers to Structures.
 - c) How to pass a structure as an argument of a function?