

S.D.E.
M.C.A. SEM - VI : WINTER - 2017
SUBJECT : COMPREHENSIVE EXAMINATION (CONVENTIONAL TYPE)

Day : **Saturday**
Date : **16/12/2017**

Time : **02.00 P.M. TO 05.00 P.M**
Max. Marks : 100

W-2017-4451

N.B.:

- 1) Attempt **ANY FIVE** questions.
- 2) Figures to the right indicate **FULL** marks.

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- Q.1** Define operating system. Explain various types of operating systems with their merits and demerits. [20]
- Q.2** Write a C program to sort list of given n numbers using Bubble sort. Trace the same for list given below. [20]
18, 34, 45, 52, 09, 68, 75, 40.
- Q.3** Define system calls. Explain system calls for the file system with reference to LINUX. [20]
- Q.4** Explain application software requirements specifications in detail. [20]
- Q.5 a)** Define computer network. Describe different network topologies. [10]
- b)** Define DBMS. Explain its architecture with neat diagram. [10]
- Q.6** Explain singly linked list as data structure. [20]
- Q.7** What is combinational circuit? Explain the half adder and full adder circuits with logic diagram and truth table. [20]
- Q.8 a)** The English language consists of 21 consonants and 5 vowels. How many 5 lettered words, consisting of at least 9 vowels and 2 consonant can be formed from them. [10]
- b)** Define recursion. Write C program to find 9th term of Fibonacci series. [10]

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