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P.E.S. College of Engineering, Mandya - 571 401
(An Autonomous Institution affiliated to VTU, Belagavi)
First Semester, B.E. - Semester End Examination; Dec - 2017/Jan - 2018
Computer Concepts and C Programming
(Common to All Branches)

Time: 3 hrs   *Max. Marks: 100*

Note: Answer **FIVE** full questions, selecting **ONE** full question from each unit.

UNIT - I

1 a. Describe different functional units of a digital computer with a neat diagram. 7

  b. Write an algorithm to compute the largest of three numbers. 7

  c. List the fundamental data types available in C. Give size and format of each data type. 6

2 a. Write a flow chart to find average of *n* numbers. 10

  b. List the rules for variables, give example. 5

  c. Evaluate the following C expressions :

```
#include<stdio.h>
main ( )
{
 int x = 100;
 printf ("%d\n", 10+ x++);
 printf("%d\n",10+ ++x);
}
```
  5

UNIT - II

3 a. Describe formatted input and output statements with format, give examples for each. 8

  b. Write a C program to compute the roots of a quadratic equation using switch statement. 12

4 a. Explain general format of else if ladder, give example. 8

  b. Distinguish between entry controlled loop and exit controlled loop. 6

  c. Write a C program to find sum of squares of all integers between 1 and 10 using do while loop. 6

UNIT - III

5 a. Define derived data types. Give examples. 5

  b. Explain initialization of one dimensional array. 7

  c. Write a C program to implement BUBBLE SORT. 8

6 a. Write a C program and flow chart to find transpose of a matrix A[3][3]. 13

  b. List string Handling functions, explain with examples. 7

UNIT - IV

7 a. Describe elements of User defined functions. 5

  b. Define pointer variable. Give example to declare a pointer variable. 5

  c. Illustrate with example, how a variable can be accessed through its pointer? 10

8 a.	Explain category of functions.	10
b.	Write a C program to add *N* numbers using pointer variable.	10

UNIT - V

9 a.	Write a C function to return the sum of two complex numbers.	5
b.	Explain unions with example.	6
c.	Explain standard library functions for files.	9
10 a.	Describe size of structures, give example.	7
b.	What is a structure? Define a structure with data members as employee name, employee code, employ basic pay and employee IT and initialize a structure variable.	7
c.	What is a file? Discuss the diferent file open modes.	6

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