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BMS College of Engineering, Bangalore-560019

(Autonomous Institute, Affiliated to VTU, Belgaum)

January 2017 Semester End Make Up Examinations

Course: **C PROGRAMMING** Duration: **3 hrs**
Course Code: **14CS1ICCCP** Max Marks: **100**
Date: 18.01.2017

Instructions: **1. Answer any five full questions choosing one from each unit.**
2. Assume missing data (if any) suitably.

UNIT 1

1. a) Explain the basic data types used in C. Illustrate the use of sizeof operator with a C program and give sample output. **10**
   b) Develop a program to demonstrate Conditional Operator to find largest of three numbers. **05**
   c) Evaluate the following expressions where, **05**
   a=100, b=20, c=10, d=5, e=1 and x=3, y=4 ,z=1
      i. a/b<=c-d+a%c-b==d>=e!=b
      ii. ++d- e--
      iii. x/y/x%5&&z

UNIT 2

2. a) Illustrate Conditional branching statements with an example. **10**
   b) Develop a program to check whether a given integer is a Palindrome or not with sample output. **05**
   c) Differentiate between while loop and do while loop. **05**

OR

3. a) Develop a program to input a decimal number and display the binary equivalent of this number with sample output. **08**
   b) Develop a program to print the following pattern **06**

```
1
2  2
3  3  3
4  4  4  4
5  5  5  5  5
```

   c) Compare the use of break and continue with example. **06**

UNIT 3

4. a) Describe the different ways of passing parameters to the function with example. **08**
   b) Develop a program to add two matrices. Give sample output. **06**

c) Given an array with n=5 and array elements are **06**

50	20	40	60	85

Analyze which searching technique could be applied to find the element 60 in the array and develop a program to search the given element and print the position of the element.

UNIT 4

5. a) Define String. Develop a program to convert characters of an input string into uppercase if lower and vice versa. Give sample outputs. **08**

b) Develop a C program to append the given input string. [Given string1: "BMS" and string2: "COLLEGE"]. **06**

c) Illustrate the different methods of reading and printing the strings. **06**

OR

6. a) Develop a program to read and display information of an Employee using structure within a structure. Members of the structure are ename, eid, salary, DOB. Give sample outputs. **10**

b) Explain self-referential structures with example. **05**

c) Illustrate the different ways of initialization of a structure with example. **05**

UNIT 5

7. a) Evaluate the output of the program segment. [Assume the values wherever necessary] **04**

```
#include<stdio.h>
void main()
{
int a=10;int *p;
p=&a;
printf("%d\n", *(&a));
printf("%d\n", *p);
printf("%d\n", ++*p);
printf("%d\n", ++(*p)/2-8);
                }
```

b) Explain various file operations in C. **08**

c) Develop a program to create a linear linked list of two nodes and display the list. **08**

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