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# BMS College of Engineering, Bangalore-560019

(Autonomous Institute, Affiliated to VTU, Belgaum)

## December 2016 Semester End Main Examinations

Course: **C PROGRAMMING**  
Course Code: **14CS11CCCP**

Duration: **3 hrs**  
Max Marks: **100**  
Date: 23.12.2016

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

### UNIT 1

1. a) Define variable? Explain the rules for constructing a variable. **06**  
b) Explain any four operators in C language with an example for each. **08**  
c) Mention the different data types supported by C language, giving an example for each. **06**

### UNIT 2

2. a) Explain while and do-while loop with example. **08**  
b) Develop a program to input 3 numbers and find the largest of them using && operator. **06**  
c) Show how break and continue statements are used in a C program, with an example. **06**

### OR

3. a) Outline if, if-else and cascaded if-else conditional statements with example. **06**  
b) Explain the syntax of switch statement. Demonstrate the use of switch statement to develop a simple calculator. **08**  
c) Implement a program to print the following pattern **06**

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

### UNIT 3

4. a) Illustrate the parameter passing mechanisms in C? **06**  
b) Develop a program to find the second biggest number using an array of n numbers. **06**  
c) Develop a program to multiply two mxn matrices. **08**

### UNIT 4

5. a) Explain different methods for reading and writing of strings. **06**  
b) Develop a program to perform the concatenation of two strings without using library function. **06**  
c) Illustrate the structure declaration and the usage of nested structure with an example. **08**

### OR

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|----|----|---|-----------|
| 6. | a) | Develop a program to find the length of a string.                           | <b>04</b> |
|    | b) | Develop a program to convert lowercase to uppercase and vice versa.         | <b>06</b> |
|    | c) | Explain appending of two strings and develop a program to perform the same. | <b>06</b> |
|    | d) | Describe self-referential structures.                                       | <b>04</b> |

**UNIT 5**

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|----|----|--|-----------|
| 7. | a) | Define a pointer? Explain declaration of pointer with an example                             | <b>04</b> |
|    | b) | Write a function using pointers<br>to exchange the values stored in two locations in memory. | <b>06</b> |
|    | c) | Describe the usage of MALLOC.  | <b>05</b> |
|    | d) | Explain getc() and putc() function.  | <b>05</b> |

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