



CS101/CS201

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M S RAMAIAH INSTITUTE OF TECHNOLOGY

(AUTONOMOUS INSTITUTE, AFFILIATED TO VTU)

BANGALORE - 560 054

SEMESTER END EXAMINATIONS - JANUARY 2016

Course & Branch : **B.E. - Common to all branches**

Semester : **I/II**

Subject : **CS101/CS201**

Max. Marks : **100**

Subject Code : **Fundamentals of Computing**

Duration : **3 Hrs**

Instructions to the Candidates:

- Answer one full question from each unit.

UNIT - I

1. a) Define the following terms: Operating System, Compiler, CO1 (06)
Spreadsheet, Database management, Symbolic Constant and
Preprocessor directives.
- b) Illustrate the process or methodology to solve Engineering Problems CO7 (08)
with the suitable example.
- c) Discuss the rules for selecting a valid identifier. Identity and give CO1 (06)
reasons for valid and invalid Identifier for the following:
function(x), x_sum, break, #number
2. a) Explain the Increment and Decrement Operators with an Example for CO1 (06)
each.
- b) Create a C-program to find whether given number is positive, CO6 (06)
negative or zero using Conditional Operator.
- c) Find the output of the following: CO2 (08)

<pre>A. main() { int a; a=5<=8 && 6!=5; printf("%d", a); }</pre>	<pre>B. main() { char x; int y; x=100; y=121; printf("%c\n",x); printf("%c\n",y); printf("%d\n",x); }</pre>
<pre>C. main() { int x=5,y=9,z=10; x=y==z printf("%d",x); }</pre>	<pre>D. main() { int a,b=5; char c='B'; a=b+c; printf("\n a=%d",a); }</pre>



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UNIT – II

3. a) Create a C program to check whether the given Character is an Alphabet and Convert it from Lowercase to Uppercase & vice versa. CO5 (06)
- b) Compare Entry Controlled and Exit controlled Loop with an example. Also write the flowchart. CO2 (06)
- c) Create a C-program to find area of a Triangle, Square, Circle, Rectangle using Switch Statement. CO6 (08)
4. a) Create a C program to print the following output using 'for' Loop CO6 (06)
- A
A B
A B C
A B C D
A B C D E
A B C D E F
- b) Recognize the usage of Break and Continue Statements in loops with examples. CO2 (06)
- c) Write a C Program using else-if ladder to implement the following tasks: CO6 (08)
- Accept marks of 6 subjects
 - Determine the percentage of students
 - Calculate the grade of student

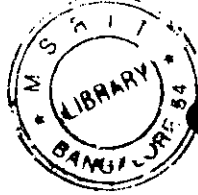
UNIT – III

5. a) Describe different ways of Initializing a two Dimensional array. Write a program to Sort elements in Ascending order using Bubble Sort CO3 (08)
- b) Write a C program to Compare two strings without using built-in functions CO5 (08)
- c) State True/False for the following Statements: CO3 (04)
- An array stores all its data elements in non-consecutive memory location
 - All the elements of the array are automatically initialized to zero when the array is defined

Fill in the blanks in the following statements:

- An array elements are accessed using _____
- The elements of an array are stored in _____ memory locations

6. a) Create a C-program to combine two strings without using built-in function. CO5 (08)
- b) Define an Array and Create a C program to search for an element in an array using Binary Search (assume the elements are sorted in ascending order). CO3 (08)
- c) Assume the array g has the following declaration: Give the value of sum after each set of statements is executed. CO3 (04)
- int i, j, g[3][3]={0,0,0},{1,1,1},{2,2,2};
- sum=0;
for(i=0; i<=2; i++)
for(j=0; j<=2; j++)
sum += g[i][j];
 - sum=1;
for(i=0; i<=2; i++)
for(j=0; j<=1; j++)
sum *= g[i][j];



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UNIT - IV

7. a) List the various categories of Functions supported by C based on the arguments and return values. Create a C program to find whether a number is a palindrome or not using functions without arguments, with return type. CO4 (10)
- b) What is a Structure? Show the Declaration and Accessing of Structure members using suitable example. CO4 (10)
8. a) Define: Automatic variable, Static Variable and External Variable. CO4 (06)
- b) Create a C program to illustrate compare and copy of structure variables. CO4 (08)
- c) Explain the Array of Structure with a suitable Example. CO4 (06)

UNIT - V

9. a) Describe Array of pointers and Create a program using pointers to compute the sum of all elements stored in an array. CO6 (08)
- b) Illustrate How you declare a file pointer variable and Explain different modes in file Open processing. CO4 (06)
- c) List and Explain set of functions to Read and Write Data from Files. CO4 (06)
10. a) Define a Pointer. Explain how to access the address of a variable and declare pointer variable. CO4 (10)
- b) Explain How problem solving is applied to Freezing Temperature of sea water CO7 (10)
