I SEMESTER B.TECH MAKE UP EXAMINATIONS, JANUARY 2016

SUBJECT: PROBLEM SOLVING USING COMPUTERS [CSE 1001] REVISED CREDIT SYSTEM

DATE:10-1-2016

TIME: 3 HOURS

MAX.MARKS: 50

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

✤ Answer ALL the questions.

↔ Missing data, if any, may be suitably assumed.

1A. Distinguish between High level and Machine level language. (write any four points)	2M 3M
10. List the characteristics of KAIVI and KOIVI.	
IC. What is system software? Give any two examples for system software.	2M
1D. Write an algorithm to check whether a given number is prime or not.	3M
2A.Determine the hierarchy of operations and show the stepwise evaluation of the follow	ing
expressions. What is the final value of these expressions? Assume $a = 15$, $b = 5$ and c	z = 0.
i) -2 + 11 - 7 * 9 % 6 / 12	
ii) a+b*5>>2	4M
2B. Explain enumerated data type with syntax and example.	3M
2C. Draw and explain the flow of control of the else-if ladder.	3M
3A. Write a complete C++ program to calculate the sum of triangular series $1 + 3 + 6 + 1$	10 +
$15 + \dots$ up to n terms using while loop and display the sum.	3M
3B. Illustrate the usage of continue and break statements in C++ with appropriate example	les
for each.	3M

- 3C. Write a complete C++ program to compute the sum of digits in a given number using recursion. 4M
- 4A. Write a single complete C++ program to do the following:

i. Read 2D matrix of order M X N.

ii. Copy the matrix elements into 1D array.

iii. Sort the resultant 1D array using bubble sort method

iv. Display the final array

4B. Write a complete C++ program to search for a substring in a main string using user defined function substr() [which takes 2 strings as parameters and returns an integer] 4M 4C. Find the output of the following error free code (assuming that the size of integer is 2 bytes):

void main() { int a[] = {1,2,9,8,6,3,5,7,8,9}; int *p= a+1; int *q= a+6; cout<< q-p <<'`\t''<<*p+*q; }

2M

4M

5A. What do y	you mean by computer security? Why is it important?	2M
5B. Write a Ps	eudo code to implement the Taylor's series method.	3M
5C. Write the	C++ program to do the following	
(i)	Define a structure student with following members: rollno, name and cgpa	
(ii)	Declare an array of student structure and create a pointer to student array.	
(iii)	Input and display the details of student array using pointer	3M

5D. Explain the following concepts of Object oriented programming:2M(i) Class(ii) Polymorphism