No. of Printed Page : 1 **SET - 1**

BACHELOR IN COMPUTER APPLICATIONS (BCA)

Term-End Practical Examination

01391

June, 2014

BCSL-045 : INTRODUCTION TO ALGORITHM DESIGN LAB

Time allowed : 1 hour *Maximum Marks : 50*

Note : *(i) There are two questions carrying **20** marks each.*
*(ii) Each question is **compulsory**.*
*(iii) **All** programs are to be written in C-language.*
*(iv) **10** marks are for **viva-voce**.*

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1. Write a program to generate Fibonacci series of 10 numbers and calculate total number of addition operations and how many times the loop will execute ? **20**

2. Write a program to compute GCD (Greatest Common Divisor). Show running time of each statement and total running time of the program. **20**

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SET - 2

BACHELOR IN COMPUTER APPLICATIONS (BCA)

Term-End Practical Examination

01097

June, 2014

BCSL-045 : INTRODUCTION TO ALGORITHM DESIGN LAB

Time allowed : 1 hour *Maximum Marks : 50*

Note : *(i) There are **two compulsory** questions.*
*(ii) Each question carry **20** marks.*
*(iii) **10** marks are for **viva-voce**.*
(iv) Programs are to be written in C-language.

1. Write a program to find out both the largest and the smallest integer in an array. Also count how many comparison operations are involved in each. **20**

2. For the following program calculate the time complexity : **20**

```
for (i=0; i<n; i++)
for (j=0; j<n; j++)
for (k=0; k<n; k++)
print f("first+second+third loop");
```

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BACHELOR IN COMPUTER APPLICATIONS (BCA)

Term-End Practical Examination

00835

June, 2014

BCSL-045 : INTRODUCTION TO ALGORITHM DESIGN LAB

Time allowed : 1 hour *Maximum Marks : 50*

Note : *(i) There are **two compulsory** questions.*
*(ii) Each question carry **20** marks each.*
*(iii) **10** marks are for **viva-voce**.*
*(iv) **All** programs are to be written in C-language.*

1. Write a program to organize data stored in an array in descending order and calculate a number of comparison operations for best case and worst case. **20**

2. Write a program to find the length of a given string. Calculate total number of addition and comparison operations. **20**

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BACHELOR IN COMPUTER APPLICATIONS (BCA)

Term-End Practical Examination

00887

June, 2014

BCSL-045 : INTRODUCTION TO ALGORITHM DESIGN LAB

Time allowed : 1 hour *Maximum Marks : 50*

Note : *(i) There are **two compulsory** questions.*
*(ii) Each question carries **20** marks.*
*(iii) **10** marks are for **viva-voce**.*
(iv) Programs are to be written in C-language.

1. Write a program to reverse a string and calculate : **20**
   (a) Total number of swap operations
   (b) How many times the loop will execute

2. Sort the data stored in an array in ascending order using selection sort algorithm and calculate total number of comparison operations. **20**