

2019

B.Sc.

4th Semester Examination

COMPUTER SCIENCE (Honours)

Paper - SEC2P

[Practical]

Set - I

Full Marks : 15

Time : 3 Hours

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Answer any **one** question (on lottery basis)

1×10=10

1. Write a HTML code to create a webpage using nesting of lists. The page also contains image tag with height and width and also used for background colour.
2. Create an HTML document which implements internal linking as well as external linking.

[Turn Over]

3. Create an HTML document to create a webpage using table tags (1) using row span and column span (2) background image in a table.
4. Write a codes to create a web page using Table tags (1) create table of 3 rows and columns, (2) having border, border size, border color (3) Image in a particular cell.
5. Create a form using HTML which has the following types of controls (1) Text box, (2) option / radio buttons, (3) Check boxes, (4) Reset and submit buttons.
6. Create HTML documents in the following format using traames

Frame 1	
Frame 2	
Frame 3	Frame 4

7. Write a code to create a web page using following tags (1) text, (2) Manquee, (3) Character formatting tags such as B, I, U.
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SOFTWARE LAB BASED ON XML

Answer any *one* question (on lottery basis)

1×10=10

1. Create an XML document with the following sample real estate data → Root element real-estates will contain a sequence of sub-elements agencies, owners, properties and flats, all with an empty content. → ensure well-formedness.
2. Create an internal DTD for following XML document an ensure its validity.

```
<! DOCTYPE note
```

```
[
```

```
<! ELEMENT note (to, from, heading, body) >
```

```
<! ELEMENT to (# PCDATA) >
```

```
<! ELEMENT from (# PCDATA) >
```

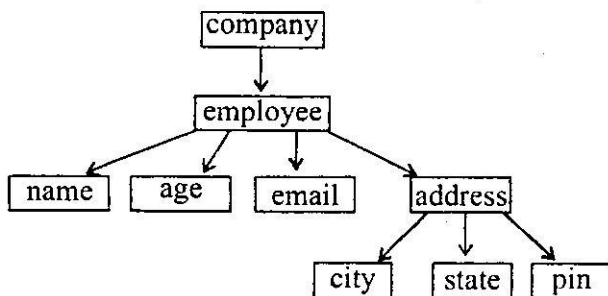
```
<! ELEMENT heading (# PCDATA) >
```

```
<! ELEMENT body (# PCDATA) >
```

```
] >
```

[Turn Over]

3. Draw a tree representation of the following structure



4. Deconstructing the XML document

< book >

< cover Into >

< title > The XML Handbook < / title >

< author > Charles. Goldberg < / author >

< author > P. Precond < / author >

< edition > Fifth < / edition >

< description > This is a book < / description>

< / coverInto >

< / book >

**SOFTWARE LAB BASED
ON SQL-PL-SQL**

Answer any *one* question (on lottery basis)

1×10=10

1. Create a relational database with the following relations and insert atleast 8 records in each table of relation.

employee (E-id, name, designation, salary, comp-id, years-of-exp)

company (comp-id, c-name, address, turnover)

- (i) Write a SQL to display name and designation of the employee of companies whose turnover is Rs. 2,00000/- or above.
 - (ii) List the name and address of the companies whose turnover is more than Rs. 1,00000/- and have more than 50 employees on roll.
 - (iii) Create a view that stores name and designation of all the companies, whose turnover is less than Rs. 5,00,000/-
2. Create a relational database with the following relations and insert atleast 8 records in each table of the relation.

[Turn Over]

Dept (D-id, D-name, Address, year-of-Establishment)

employee (E-id, D-id, Name, Designation, year-of-experience)

Salary (E-id, Basic, DA, HR-A, Perks, Gross)

- (i) Write a procedure to display the name and year of experience of all the employees, who work for D-id = 1001 and have gross salary more than 50,000/-
- (ii) Write a trigger that fires before any row is inserted in SALARY table.
- (iii) List name and designation of all the employees who work for department-id = 2002 and have more than 10 years of experience.

SOFTWARE LAB BASED ON LINUX

Answer any *one* question (on lottery basis)

1×10=10

1. Write a shell program to read 10 numbers from keyboard and sort them
2. Write a shell program to find the GCD of two numbers.

3. Write a shell program to find the fibonacci series for first 10 numbers.
4. Write a shell script to display the multiplication table for 7.
5. Write a shell script to find the binomial coefficient $C(n, x)$.
6. Write a shell script to find the factorial of 8.
7. Write a shell script to compare two files and if found equal asks the user to delete the duplicate file.
8. Write a shell script to check whether a given number is armstrong or not.
9. Write a shell program to check whether a given number is in a list or not.

**SOFTWARE LAB BASED ON
R PROGRAMMING**

Answer any *one* questions. $1 \times 10 = 10$

1. Write a program in R to generate first nth fibonacci numbers. The number n is supplied by the user.

[Turn Over]

2. Write a program in R to generate all prime numbers upto a given range the range supplied by the user.
3. Write a program in R to sort n numbers using bubble sort.
4. Write a program in R to implement transpose of a matrix.
5. Write a program in R to Convert a given matrix to a list.
6. Write a program in R to convert a given dataframes to a list by rows.
7. Write a R program to implement the binary search.
8. Write a R program to check whether a given list is palindome or not.
9. Write a R-program to sort n given numbers using insertion sort.
10. Write a R-program to find the largest element in a list.

[PNB - 02, Viva - 03]
