UG/4th Sem/COMP./19(Pr.)

2019

B.Sc.

4th Semester Examination

COMPUTER SCIENCE (Honours)

Paper - SEC2P

[Practical]

Set - II

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.

SOFTWARE LAB BASED ON HTML

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

1×10=10

1. Create a static webpage using table tags of HTML to prepare a marksheet of either WBBSE or ICSE or CBSE.   10

[Turn Over]

2. Create employee registration webpage using HTML form objects using radio button, check box, combo box, text and textarea and also using 'Submit' and 'Reset' button. [10]

3. Create a webpage using list tags of HTML (e.g. ordered, unordered and definition list.)

4. Create an HTML document with the following formatting options :

   (a) Bold

   (b) Italics

   (c) Underline

   (d) Heading (Using H1 to H6 heading styles)

   (e) Font (Type, size and color)

   (f) Background (Image in background)

   (g) Paragraph

   (h) Line Break

   (i) Horizontal Rule

   (j) Pre tag

5. Create an HTML document which consists of :

   I. Ordered List

   II. Unordered List

III. Nested List

IV. Anchor List

- Home

- Academics

    I. Shift - 1

        a. Graduate

            1. B.Sc.

            2. BA

            3. BCA

        b. Post Graduate

            1. M.Sc.

            2. MA

            3. MCA

    II Shift - 2

        a. M.Phil

        b. Ph.D

- About us

- Contact us

6. Create a form using HTML which has the following types of controls :

   I. Text Box

   II. Option / radio buttons

   III. Check boxes

   IV. Reset and Submit button

7. Create a table using HTML with the following view

Subject		John Doe	Miriam Luther
Biology	Practical	A	A
	Theory	A+	A
Chemistry	Practical	B	C
	Theory	A	C+
Physics	Practical	A	A
	Theory	B	A+

[PNB - 02, Viva-voce - 03]

SOFTWARE LAB BASED ON XML

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

1×10=10

1. Create a simple XML file of student admission form where XML tags are used.

2. Write an application to create an XML document from a college employee database. The XML document should contain the following

      i) EMPLOYEE CODE

      ii) EMPLOYEE NAME

      iii) DESIGNATION

      iv) ADDRESS

      v) DEPARTMENT

      vi) SALARY

[Turn Over]

3. Consider the following information about student information system :

ID	NAME	BOARD	YEAR OF PASSING	GRADE
1	AKASH	WBBHSE	2014	A
2	ASIT	ISC	2015	B
3	AYAN	CBSC	2013	A
4	AVISHEK	ISC	2014	A

Encode the above student informaion system table in a well formed XML document.

4. Write a query in XQuery on the XML representation of the following schema to find the total balance across all accounts at each branch.

account (account_number, branch_name, balance)

customer (customer_name, customer_street, customer_city)

depositor (account_number, customer_name)

5. Draw the tree representation of XML data given below.

< book >

    < coverinfo >

        < title > The XML Handbook </title>

III. Nested List

IV. Anchor List

- o Home
- o Academics
    - I.   Shift - 1
        - a. Graduate
            1. B.Sc.
            2. BA
            3. BCA
        - b. Post Graduate
            1. M.Sc.
            2. MA
            3. MCA
    - II   Shift - 2
        - a. M.Phil
        - b. Ph.D
- o About us
- o Contact us

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< book >

    < coverinfo >

        < title > The XML Handbook </title>

< author > Charles F.Goldfrab </author>

< author > Paul Presscod </author>

< edition> Second </edition>

<description> The definitive XML resource : applications. products and technologies. Revised and expanded-over 600 new pages.

</description>

</coverinfo>

</book>

[PNB : 02, Viva-voce : 03]

SOFTWARE LAB BASED ON SQL/PL-SQL

Answer any *one* question (on lottery basis)

$1 \times 10 = 10$

1. For a library management system

(a) Create the following relation using SQL and enter 10 records. 4

Books : ISBN, Title, Author, Date of Purchase.

(b) Answer the following queries using SQL 6

[Turn Over]

(i) List all the ISBN No., book names, author names for all available books.

(ii) List all the books history whose title starts with 'Database'.

(iii) List all the books which have bean purchased within previous one month.

2. Create a student information table with the following fields :

(i) Name

(ii) Year_of_joining

(iii) Year_of_passing

(iv) Percentage_of_marks_obtained

(v) Present_status (employed/unemployed/higher study)

(vi) Location of employment/study.   4

Then answer the followinig questions :

(a) List all the students who are studying in I.I.T.

2

(b) List all the students who are unemployed in a particular passing year.   2

(c) List first 10 students according to their percentage of marks obtained.   2

3. EMPLOYEE (e_no, e_name, street, city)

WORKS (e_no, company_name, salary)

COMPANY (company_name, city)

DEPT (company_name, Dept_no, dept_name)   4

   (a) Find the name of all employees who work as a project Manager in "TCS".   3

   (b) Find the address and salary of all employees who works for "Microsoft".   3

4. EMP (e_no, e_name, b_sal, d_no, join_date)

DEPT (d_no, d_name, location)

LOAN (e_no, l_no, l_date, amt)   4

   (a) Produce a list of employees currently not taking any loan.   2

   (b) List the employees whose department is located in KOLKATA and have more than one loan.   2

   (c) Delete all loans where b-sal is less than 4000.   2

5. (a) Create a library database file with the following fields and enter 8 records in the database file.   4

[Turn Over]

BOOK (ISBN_No, Title, Author, Date_of_purchase, current_stock).

(b) Write command for listing the book details which has maximum stock.   3

(c) List the book details in alphabetical order according to their titles.   3

[PNB : 02, Viva Voce : 03]

SOFTWARE LAB BASED ON LINUX

Answer any *one* question (on lottery basis)

$$1 \times 10 = 10$$

1. Write a shell script to check whether a number is palindrome or not.

2. Write a shell script to calculate the series $S = 1 + 3 + 5 + ... + n$. The number n should be supplied through the command line.

3. Write a shell script to modify the *Cal* command to display the calender of the specified months.

4. Write a shell script to find out the roots of a given equation. $x^2 + bx + c = 0$.

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4. Write a shell script to find out the roots of a given equation. $x^2 + bx + c = 0$.

5. Write a shell script to generate the first n numbers of fibonacci series. The number n should be supplied by the user.

6. Write a shell program to find the GCD of two numbers.

7. Write a shell program to find the sum of digits of a given number.

8. Write a shell program to find the greatest number among the three numbers.

9. Write a shell program to check whether a given file has all the permissions or not.

10. Write a shell program to check whether a number is Armstrong or not.

[PNB : 02, Viva-voce : 03]

SOFTWARE LAB BASED ON
R PROGRAMMING

Answer any *one* questions (on lottery basis)

1. Write a program in R that tests whether a string is a palindrome or not.

[Turn Over]

2. Write a program in R that returns the largest element in a list.

3. Write a program in R to implement the multiplication of two matrices.

4. Write a program in R to extract all elements except the third element of a given list.

5. Write a R program to read two matrices A and B, and find the product of A and B.

6. Write a R program to sort a given list using bubble sort.

7. Write a R program to sort a given list using insertion sort.

8. Write a R program to sort a given list using selection sort.

9. Write a R program to print first 5 non fibonacci prime number.

10. Write a R program to implement the linear search.

11. Write a R program to test whether a string is palindrom or not.

12. Write a R-program for matrix addition.

[PNB : 02, Viva-voce : 03]