

Roll No. ....

Total Pages : 4

BT-8/J-25

48253

## WEB AND INTERNET TECHNOLOGY

Paper-OE-CS-410A

Time Allowed : 3 Hours]

[Maximum Marks : 75

**Note** : Attempt **five** questions in all, selecting at least **one** question from each Unit. All questions carry equal marks.

### UNIT-I

1. (a) What are the basic uses of Architectural Page mock-ups in order to design efficient Information architecture? 5
- (b) Identify the various design paradigms which are involved in organizing Web Sites and Intranets ? 5
- (c) What do you mean by Cohesive Organization Systems? How to create Cohesive Organization Systems? 5
2. (a) What are the design implications of Search Algorithms? Explain any two types of Search algorithms to search efficient information on the Search Systems. 8

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- (b) In what ways, the performance of any Information Architecture can be improved ? 7

## UNIT-II

3. (a) Define Workstation. Explain the working architecture of Firewalls. What are the common challenges in configuring firewalls for Cloud environments? 5
- (b) Describe the Cascading Style Sheet (CSS) with an Example use the Font Attributes and Text Attributes in the example. Discuss term Entity in XML. 5
- (c) Write HTML code to show how one vertical frame window and Second vertical window is further split horizontally using nested frameset? 5
4. (a) Write HTML code for a single webpage for the following:
- (i) To create an ordered list and nested list.
  - (ii) To create links to two search engines and to create a hyperlink on the Picture with caption.
  - (iii) Write a HTML program to Print a Paragraph with 4 sentences. Each sentence should made of different font. 8
- (b) Write a program in HTML5 for the following:
- (i) Canvas Element,

(ii) New input type attribute.

(iii) Add video and audio.

7

### UNIT-III

5. (a) What are lists, tuples and scope in Python? Write a program in Python to find the smallest and largest number in a List. 5

(b) How is memory managed in Python? Also, explain the concept of namespaces and scope resolution operator with the help of an appropriate standalone program in Python. 5

(c) What type of conditional structures are present in a Programming Language? How many of them are supported in Python? Explain each with a suitable Program in Python. 5

6. (a) Explain default Constructor and Parameterized Constructor and Destructor with the help of a single Standalone Program in Python. 8

(b) Explain the purpose of using recursion and Global variables in Python. Write a Python program to calculate the nth Fibonacci number using recursion, while also tracking the number of function calls made. Implement this using a Global variable to count the calls. 7

## UNIT-IV

7. (a) Explain in detail about Python files, its types, functions and operations that can be performed on files with examples. 8
- (b) Write a program in Python to accept string/sentences from the user till the user enters "END" to. Save the data in a text file and then display only those sentences which begin with an uppercase alphabet. 7
8. (a) How can you read and write CSV files in Python? Write a program in Python to read first line from the file ("data.txt"), number of lines in a file ("data.txt"), read first seven characters from a file ("data.txt"), and display first line from the file ("dat.txt") using readlines(). 8
- (b) What are exceptions in Python, and why are they important? How do you handle multiple exceptions in a single try block? Also, explain how to create custom exceptions in Python? 7