



SPRING END SEMESTER EXAMINATION-2024

4th Semester B.Tech

WEB TECHNOLOGY

IT2004

(For 2021 & Previous Admitted Batches)

Time: 2 Hours 30 Minutes

Full Marks: 50

Answer any FIVE questions.

Question paper consists of two SECTIONS i.e. A and B.

Section A is compulsory.

Attempt any Four question from Sections B.

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable and all parts of a question should be answered at one place only.

SECTION-A

1. Answer the following questions: [1 × 10]
- (a) How can CSS be integrated into an HTML page?
 - (b) What are various heading tags and their importance in HTML?
 - (c) What are default values provided by the JVM to the instance variables?
 - (d) Can we use *this* and *super* both together in a constructor? Justify your answer.
 - (e) Differentiate between a constructor and a method.
 - (f) What will happen if we don't declare the main method as static?
 - (g) List purposes of the "super" keyword in Java.
 - (h) Can you overload the main method in Java? Justify your answer.
 - (i) State uses of 'throw' and 'throws' keyword in Java.
 - (j) Differentiate between an applet and a Java application.

SECTION-B

2. (a) What will happen if we define a Java abstract class as final? What will happen if we define a static method inside an abstract class in Java? Justify your answer in both cases. [5]
- Illustrate the uses of abstract class using a Java program.
- (b) Design a class to overload the method display(.....) as follows: [5]
- void display(int num) : check and print whether the number is a palindrome or not.
- void display(String str, char ch) : check and prints if the word str contains the letter ch or not.
3. (a) How to design a web page using HTML and CSS? Explain with a program. [5]
- (b) Write a java program to display following object-oriented property: Encapsulation, Polymorphism, Reusability, Data Hiding, and Abstraction. [5]
4. (a) What is the difference between HTML and HTML5? Design a login page of a website using HTML. [5]
- (b) Define an interface named 'MeanInterface' with two methods – mean() and deviation(). Define a Java class 'Calculation' which implements this interface. The mean() method calculates the mean of the given numbers arranged in an array and deviation() method calculates deviation from the mean value evaluated for each of the numbers. Write the complete program to find out mean and deviations. [5]
5. (a) What is package? How do we add a class to an user-defined package? How to import a created package in another application? Explain these with some programs. [5]

- (b) Write a Java class which has a method called factorial(). This method checks the number entered by the user and calculates the factorial of a positive number. If the entered number is negative then throw a user defined exception called Negative Fact Exception. [5]
6. (a) What is applet? Explain the Life Cycle of an applet and discuss the different state transition on the basis of a method call. [5]
- (b) Draw a solid rounded corner rectangle, an oval and a polygon using applet program. [5]


