

Code: 20IT3502

**III B.Tech - I Semester – Regular / Supplementary Examinations
NOVEMBER 2024**

**WEB TECHNOLOGIES
(INFORMATION TECHNOLOGY)**

Duration: 3 hours

Max. Marks: 70

Note: 1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.

2. All parts of Question must be answered in one place.

BL – Blooms Level

CO – Course Outcome

			BL	CO	Max. Marks
UNIT-I					
1	a)	Describe the evolution of the World Wide Web(WWW) from its inception to the present day. Explain the key milestones and technological advancements.	L1	CO1	7 M
	b)	Explain the different ways to apply CSS to an HTML document (inline styles, internal style sheets and external style sheets). Provide examples to illustrate each method.	L2	CO1	7 M
OR					
2	a)	What is HTML? Explain its significance in web development. Explain ANY 5 basic HTML tags with its syntax.	L1	CO1	7 M
	b)	What is table and frame in HTML? Explain an example of an HTML table and explain how frames can be used to organize content on a web page?	L1	CO1	7 M

UNIT-II					
3	a)	Explain the purpose of a Document Type Definition (DTD) in XML. Discuss the role of XML technologies such as XHTML, DOM, SAX and Extensible HTML (XHTML). Explain examples to illustrate the use of DTD in XML documents.	L2	CO1	7 M
	b)	Discuss the different types of variables in JavaScript and how they are declared. Write examples to demonstrate the use of var, let and const in variable declarations.	L2	CO2	7 M
OR					
4	a)	Explain the concepts of arrays and objects in JavaScript. Provide examples to show how to create, access and manipulate arrays and objects.	L2	CO2	7 M
	b)	Describe the various operators available in JavaScript and their usage. Explain the different control flow statements (if-else, switch, for loop, while loop) with examples.	L2	CO2	7 M
UNIT-III					
5	a)	Explain the concept of transaction management in JDBC. Describe how to manage transactions using the Connection interface methods such as setAutoCommit, commit and rollback.	L2	CO3	7 M

	b)	Describe the different types of JDBC drivers (Type 1, Type 2, Type 3 and Type 4). Compare their features, advantages and disadvantages.	L2	CO3	7 M
OR					
6	a)	Write a Java program that establishes a connection to a database, executes a simple SQL query and retrieves the results. Explain the steps and code involved in the process.	L3	CO3	7 M
	b)	Write a Java program that demonstrates the use of CallableStatement to call a stored procedure in a database.	L3	CO3	7 M
UNIT-IV					
7	a)	Define what is a Servlet and explain its role in Java-based web applications. Discuss how Servlets interact with web clients and servers.	L2	CO3	7 M
	b)	Explain the Model-View-Controller (MVC) architecture and its significance in web application development.	L2	CO3	7 M
OR					
8	a)	Write a simple Java Servlet that processes a basic HTTP GET request and responds with a "Hello, World!" message. Explain the code and steps involved in creating and deploying the Servlet.	L3	CO3	7 M

	b)	Explain the purpose of the web.xml configuration file in a Java web application. Describe how to configure a Servlet, including the mapping of URLs to Servlet classes, in the web.xml file.	L2	CO3	7 M
UNIT-V					
9	a)	Write a simple JSP page that displays a "Hello, World!" message. Explain the steps involved in creating, deploying and accessing the JSP page in a web application.	L3	CO4	7 M
	b)	Discuss the basic tags used in JSP (<%= %>, <% %>, <%! %>). Explain the role of implicit objects in JSP (such as request, response, session, application, out, config, pageContext, page and exception).	L3	CO4	7 M
OR					
10	a)	Explain what are JavaBeans and their significance in JSP. Describe how to use action tags (<jsp:useBean>, <jsp:setProperty>, <jsp:getProperty>) to work with JavaBeans in a JSP page. Provide an example to demonstrate the process.	L3	CO4	7 M
	b)	Describe the life cycle of a JSP page. Explain the phases of translation, compilation, initialization, execution and cleanup and the methods involved at each stage.	L2	CO4	7 M