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B.TECH
(SEM VI) THEORY EXAMINATION 2022-23
WEB TECHNOLOGY

Time: 3 Hours**Total Marks: 100****Note:** Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt all questions in brief.**2 x 10 = 20**

- (a) Explain the concept of client and server. Also describe how a Web Server is different from normal server.
- (b) Differentiate between HTTP and HTTPS.
- (c) Differentiate between internet and WWW.
- (d) Compare Internet services with protocols.
- (e) Discuss the history of WWW in brief.
- (f) Compare Java Class and Interface.
- (g) Write a Simple program in Java to create an Applet able display "Hello World" message upon execution.
- (h) Differentiate between threads created by Thread class and Runnable interface.
- (i) Describe classes and objects in Java. Describe the relationship with suitable real world example.
- (j) Discuss the concept of layouts and their types in AWT. Differentiate between Border Layout and Flow Layout.

SECTION B

2. Attempt any three of the following:**10x3=30**

- (a) Illustrate the concept of multi-threading. Write a code in Java to create three threads having name Red, Blue and Green. Justify why should we use run() method instead of start() to launch a Thread.
- (b) Discuss the applications of XML. Also compare XSD and DTD.
- (c) Describe <form> tag and its attributes. Also differentiate GET and POST methods.
- (d) Illustrate Java Beans and their properties in detail.
- (e) Explain the implicit and explicit objects in JSP. Describe request, response and session objects in detail.

SECTION C

3. Attempt any one part of the following:**10x1=10**

- (a) Outline the differences between Encapsulation and Abstraction. Illustrate with suitable example.
- (b) Describe method overriding in Java. Compare method overriding and method overloading with suitable example.

4. Attempt any *one* part of the following: 10x1=10

- (a) Describe frames in HTML. Write markup to create a web page that contains the three vertical columns, having background color as red, blue, green respectively.
- (b) Design a self-describing XML DTD for storing email data.

5. Attempt any *one* part of the following: 10x1=10

- (a) Discuss about Math and Date Objects in JavaScript. Write a program in JavaScript to display digital clock showing HH:MM:SS.
- (b) Discuss about Java Socket programming. Write a program in Java create client and Server using Socket, Server Socket class.

6. Attempt any *one* part of the following: 10x1=10

- (a) Describe about JDBC drivers and different types of JDBC drivers. Write a java code to fetch and print the data from a Table.
Table name: EMPLOYEE
Column Name: ID, EMP_NAME, EMP_DEPT, EMP_SAL
- (b) Compare following:
 - (1) Stateful Session bean and Stateless Session bean
 - (2) Statement and Prepared Statement

7. Attempt any *one* part of the following: 10x1=10

- (a) Describe Java Servlets. Write Index.html to input the some details (name, age, Message) from user. Also write a Servlet to fetch and display the same data upon the submission of request.
- (b) Compare Servlet and JSP. Justify why Servlets performs faster in comparison to JSP. Explain the Life cycle of JSP with suitable diagram.