BTECH
(SEM V) THEORY EXAMINATION 2018-19
WEB TECHNOLOGIES

Time: 3 Hours   *Total Marks: 70*

Notes: *Assume any missing data.*

SECTION A

1. Attempt *all* questions in brief.   **2 x 7 = 14**

a. What is bytecode?
b. Define constructor.
c. What is a Instance Variable?
d. When is it appropriate to use frames?
e. What is the use of alternative text in image mapping?
f. What are the two major protocols for accessing email from servers?
g. What do you mean by Checked Exceptions?

SECTION B

2. Attempt any *three* of the following: **7 x 3 = 21**

a. Create an html page named as "Table.html" to display your class time table.
   i) Provide the title as Time Table.
   ii) Provide various color options to the cells (Highlight the lab hours and elective hours with different colors.)
b. Compare Java and JavaScript. Write a JavaScript program to define a user defined function for sorting the values in an array.
c. What is the difference applet and application? How is Java strongly associated with internet? Draw a flowchart to show various java tools are used in application development.
d. Compare JSP and Servlet. Explain the lifecycle of a JSP page with a suitable diagram. Also list any five action tags used in JSP.
e. What are the uses of layout managers? Give the name of classes that represents the layout managers. Explain any five layout managers.

SECTION C

3. Attempt any *one* part of the following: **7 x 1 = 7**

(a) Explain the HTTP Protocol. Mention three basic features of HTTP that make HTTP a simple but powerful protocol. Give its architecture.
(b) What is XML? Create a XML document of 10 students of final CSE. Add their roll numbers, marks obtained in 5 subjects, total marks and percentage. Save this XML document at the server, write a program that accepts student's roll number as input and returns the students marks, total percentage by taking student information for XML document.

4. Attempt any *one* part of the following: **7 x 1 = 7**

(a) Discuss how frames play a big role in advertising on web. What roles do form play in making web page dynamic.
(b) What are exceptions and how they are handled? Explain with an example. How we define a try and catch block? Is it essential to catch all types of exceptions?

5. Attempt any *one* part of the following: **7 x 1 = 7**

   (a)   Create an html page named as "String_Math.html" and within the script tag define some string variables and use different string function to demonstrate the use of the predefined functions. Do the same for the Math function.

   (b)   What are the advantages and drawback of Applet? Write a Java program to create an Applet for calculator and also perform event handling on each button.

6. Attempt any *one* part of the following: **7 x 1 = 7**

   (a)   What do you mean by CSS? Write a CSS rule that makes all the text 2.5 times larger than the base font of the system. Mention how can you integrate CSS on a web page?

   (b)   What is difference between Session and Cookies? Write a servlet program for servlet login and logout using cookies.

7. Attempt any *one* part of the following: **7 x 1 = 7**

   (a)   What is JDBC? Explain the Drivers used in JDBC. Write a JDBC Program for insert and display the record of employeess using prepared statement.

   (b)   What are XML Parsers? Explain the types of parsers with their advantages and disadvantages.