B.Tech. – VIEP – COMPUTER SCIENCE AND ENGINEERING (BTCSVI)

Term-End Examination

00683   **June, 2018**

BICS-023 : WEB TECHNOLOGY

Time : 3 hours   *Maximum Marks : 70*

Note : *Attempt any **seven** questions. All questions carry equal marks.*

1. (a)   What is a web application ? List at least four web applications. How is a web application different from a web service ? Give one example of web service.   5

   (b)   Explain the process of web application development.   5

2. (a)   What are frames in the context of HTML ? Explain with the help of an example.   4

   (b)   Explain the uses of <div> and <span> tags with the help of an example. What is CSS ? How can CSS be used in making a flexible website ? Explain with the help of a simple example.   6

3. Explain the following HTML elements/tags/concepts with the help of an example : *10*

   (a) <textarea> element

   (b) <select> element

   (c) Anchor element

   (d) <thead> and <tfoot> tags

   (e) Heading elements

4. (a) What are the major uses of JavaScript in the context of Web Application development ? What is an event ? How can JavaScript be used to handle an event ? Explain with the help of an example. *6*

   (b) Show HTML DOM node tree for the following HTML document : *4*

   <html> <head>
   <title> BICS-EXAM </title>
   </head>
   <body>
   <div> <p> Programme </p>
   <p> Courses </p>
   </div>
   </body>
   </html>

5. (a) Why do you require Java Beans even though you have Java Classes ? Explain various properties of Java Beans. *4*

(b) Define the following terms in the context of EJB : *6*

(i) EJB container

(ii) EJB server

(iii) Entity bean

(iv) EJB home object

6. (a) List and explain the role of life cycle methods of a servlet. *5*

(b) Differentiate between GET and POST methods in the context of HTTP. *5*

7. (a) Explain with the help of an example how Java standard exception mechanism can be used to handle error in a JSP page. *5*

(b) What is a Session Object ? Why is it needed ? Explain it with the help of an example. *5*

8. (a) Write a script using JSP which adds the numbers 1 to 10 using for loop. You must use scripting elements of JSP to write this scriptlet. *4*

(b) Explain the use of the following in context of JSP : *6*

(i) <jsp:setProperty>

(ii) <jsp:getProperty>

(iii) <jsp:include>

9. Explain the purpose of the following in context of JDBC : *10*

(i) DriverManager class

(ii) preparedStatement() method

(iii) executeUpdate() method

(iv) The ResultSet interface

(v) Creating a connection

10. Explain any *four* of the following giving an example/diagram, if needed : $4 \times 2\frac{1}{2} = 10$

(a) Types of JDBC Drivers

(b) Page Directive of JSP

(c) External CSS

(d) TCP/IP Protocol

(e) XML Document Structure

(f) AJAX