CS/B.TECH (IT)/SEP.SUPPLE/SEM-7/IT-702/2012

2012
WEB TECHNOLOGY

Time Allotted : 3 Hours   *Full Marks :* 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP – A
(Multiple Choice Type Questions)

1. Choose the correct alternatives for any *ten* of the following :

$$10 \times 1 = 10$$

   i) The correct HTML tag for the biggest heading is

   a) <h6>   b) <heading small>

   c) <small heading>   d) <h1>.

   ii) Which of the following technologies is not a part of J2EE architecture ?

   a) JSP   b) Servelet

   c) EJB   d) CORBA.

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iii) EJB contains

   a) unique interface   b) four interfaces

   c) two interfaces   d) no interface.

iv) The JSP tags are interpreted by

   a) JSP Compiler   b) JSP engine

   c) JSP Debugger   d) None of these.

v) Which of the following protocols is stateless in nature ?

   a) F.T.P.   b) HTTP

   c) TCP   d) UUCP.

vi) Variables are declared in Java Script using which of the following ?

   a) dim   b) var

   c) function   d) variable.

vii) After a servlet is destroyed, garbage collection is performed by

   a) the server   b) the servlet engine

   c) HTTP   d) JVM.

viii) Which of the following syntax is correct for commenting lines in XML ?

   a) /I   b) 1 * comments * 1

   c) : :   d) <!- - comments - - >

ix) The .... in XML is equivalent to the schema in database.

    a)   Element   b)   Attribute

    c)   Parser   d)   DTD.

x) An XML parser is used to .... the contents of an XML document.

    a)   display   b)   read but not interpret

    c)   read and interpret   d)   none of these.

xi) Which statement is true ?

    a)   XML tags are case sensitive

    b)   XML documents must have a root tag

    c)   XML elements must be properly closed

    d)   All the statements are true.

xii) Cookies are stored in

    a)   Web Server   b)   Web Browser

    c)   Database Server   d)   Application Server.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following.   3 × 5 = 15
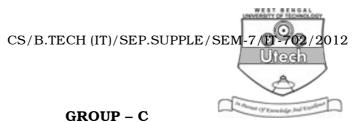
2. Why do we need to have a dynamic web page ? What is the advantage of using style sheet in formatting the different elements of web pages in a website ? How can we link a style sheet to a web page ?

3. What are the different technologies available to make a web page dynamic ? Why does Java play a vital role in dynamic web page creation ?

4. Write a brief note on the role of Java Script in client side data validation with suitable examples. State also briefly the need of client side validation.

5. What is servlet ? What do you understand by servlet API ? Describe the life cycle of a servlet.

6. Describe the anatomy of an XML document.

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following.   3 × 15 = 45

7. a) Using the FROM tag of HTML create a registration form containing the below mentioned fields :

   (i)   First Name (Using text boxes)

   (ii)   Last Name (Using text boxes)

   (iii)   E-mail ID (Using text boxes)

   (iv)   Gender (Using radio button)

   (v)   Hobbies (Using check boxes)

   (vi)   Submit Button and Reset Button.   4

   b) What is the difference between Static and Dynamic Web Pages ? What do you mean by Active Web Pages.   5

   c) In your browser there will be a textbox to enter your name. There will be a SUBMIT button. If your name field is empty then on submit this will give an alert that your name field is empty. If your name is more than 10 characters long then it will give an alert to enter your name properly. Else it will display your name in capital, bold and in red colour.   6

8. a) What do you understand by JDBC-ODBC bridging ? Write a JSP program to store the id, name and age of the employees in an organization in MS-Access database and retrieve any record by a particular id. 7

b) What do you understand by Session bean and Entity bean in EJB ? What is the difference between Java Beans and EJB ? 5

c) What is RMI ? Why is RMI useful under modern computing environment ? 3

9. a) State the main objectives of J2EE. Specify main parts of the J2EE runtime environment. 7

b) Briefly discuss web container and EJB container. 4

c) How can you implement a simple JNI ? Show with an example. 4

10. a) What is XML ? What is the basic structure of an XML document ? 2 + 3

b) Compare between SAX and DOM approaches in respect of XML Parsing. 4

c) Create an XML document which has a root element emp. Root element contains more than one No. of employee element. Each employee has sub-element empname, id, gender and address. Address has the sub-element street, city, region, postalcode, countrycode. Street has two sub-elements street1 and street2. Countrycode has an attribute c_id. Write an external DTD to validate this XML. 6

11. Write short notes on any *three* of the following : 3 × 5

a) RMI Architecture

b) J2EE Web Services

c) Client and Server side scripting

d) The life cycle of a Java applet

e) Document Object Model (DOM).

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