

**WEB TECHNOLOGY
(CSEN 3282)**

Time Allotted : 3 hrs

Full Marks : 70

Figures out of the right margin indicate full marks.

*Candidates are required to answer Group A and
any 5 (five) from Group B to E, taking at least one from each group.*

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

**Group - A
(Multiple Choice Type Questions)**

1. Choose the correct alternative for the following: **10 × 1 = 10**
- (i) How can you make an e-mail link?
(a) (b)
(c) <mail href="xxx@y.com"> (d) Both (b) and (c).
- (ii) Cookies are stored in
(a) Web server (b) Web browser
(c) application server (d) database server.
- (iii) Which of the following is true about service() method of servlet?
(a) The servlet container (i.e. Web server) calls the service() method to handle requests coming from the client.
(b) Each time the server receives a request for a servlet, the server spawns a new thread and calls service.
(c) The service() method checks the HTTP request type (GET, POST, PUT, DELETE, etc.) and calls doGet, doPost, doPut, doDelete, etc. methods as appropriate.
(d) All of the above.
- (iv) What is the code for getting the current time?
(a) now=new Date(); (b) var now= Date();
(c) var now=new Date(); (d) var now=new Date(current);
- (v) Which layer deals with user interaction?
(a) Business logic layer (b) Presentation layer
(c) Application layer (d) Data layer.

- (vi) In tunnel mode IPsec protects the
(a) entire IP packet (b) IP header
(c) IP payload (d) none of the mentioned.
- (vii) The client would like to know the HTTP methods supported by the server. Which of the following request method would the client use?
(a) GET (b) POST (c) HEAD (d) OPTIONS.
- (viii) Which of the following validation(s) should **not** be done using Javascript?
(a) Age not more than 120 years
(b) Valid number of digits in phone number field
(c) Password
(d) Username.
- (ix) Which of the following statement about XML is true?
(a) XML tags are case sensitive
(b) Tags should be properly nested
(c) XML should have a root element
(d) all of the above.
- (x) **Code:** var fruits = ["Banana", "Orange", "Apple"];
var energy = fruits.__(", ");
Output: Banana,Orange,Apple
Fill in the blank in the code:-
(a) join (b) slice (c) splice (d) split.

Group - B

2. (a) When should active Web pages be used and when should it not? What are the advantages and issues involved in dynamic Web pages?
(b) Write an external CSS file to style a table so that the odd rows have a yellow background and a header row has style white text and a black background color. Change the font so that they are all 14 point Sans Serif of some kind.
(c) Write the difference between GET and POST methods.
(3 + 3) + 4 + 2 = 12
3. (a) Design a HTML page containing: 1. a heading 2. a link 3. some contents. Draw an outline to show the layout of your page elements.
(b) On clicking the link a new page opens in an iframe in the same page. Also, initially the link colour is green. On clicking the link the colour changes to red. Write the stylesheet code corresponding to the above functionality.

(4 + 3) + 5 = 12

Group - C

4. (a) What is XML ? Why is XML superior to other forms of data exchange ?
 (b) Create an XML document which has a root element emp. Root element contains more than one number 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.

- (c) How the value of a textbox is accessed using JavaScript?

$$(2 + 2) + (2 + 4) + 2 = 12$$

5. What is HttpSession? Write a code snippet to create a session object using HttpSession and store the user id received from a request. Write appropriate service method of a servlet to create a list from the data accepted in the following HTML form.

```
<font face="verdana" size="2px">
<form action="onGPV" method="post">
Habits :
<input type="checkbox" name="habits" value="Reading">Reading
<input type="checkbox" name="habits" value="Movies">Movies
<input type="checkbox" name="habits" value="Writing">Writing
<input type="checkbox" name="habits" value="Singing">Singing
<input type="submit" value="Submit">
</form>
</font>
```

$$(4 + 8) = 12$$

Group - D

6. (a) Write a JSP scriplet for displaying even numbers between 1 to 50, and also its JSTL version.
 (b) Explain what happens in the background when a JSP page is accessed by a user from a server that supports JSP. What is the difference between scriplet and expression? State the main objectives of J2EE.

$$4 + (4 + 2 + 2) = 12$$

- 7.(a) What is JDBC driver? Write the names of four types of JDBC driver.
 (b) Define five steps to access data in an RDBMS from a Java application using JDBC.

- (c) What are the purpose of JDBC Statement, CallableStatement, and Prepared Statement as interfaces? Which one is preferred to execute stored procedure using all three types of parameters ?
 (d) For creating connection object you use following statement :
 Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/myDB","heritage","hit345");
 Explain each of the parameters used in get Connection.

$$3 + 3 + 3 + 3 = 12$$

Group - E

8. (a) Briefly describe IPsec architecture. Differentiates between transport and tunnel modes of operation of IPsec.
 (b) How is SHTTP different from SSL? How does SET protocol protect payment information from the merchant?
- 9.(a) What is packet filtering firewall? Briefly explain its working principle.
 (b) Explain brute force attack and man-in-the-middle attack.
 (c) What is a worm? How does it differ from a virus?

$$(3 + 4) + (2 + 3) = 12$$

$$(1+3) + (2+2) + (2+2) = 12$$