

**WEB TECHNOLOGIES
(CSEN 3133)**

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) The service() method is the main method to perform the actual task of servlet. Who is calling this service() method ?
(a) init() method (b) The servlet container (i.e. web server)
(c) Requester (i.e. web browser) (d) none of them.
- (ii) Applet is a
(a) Static Web page (b) Dynamic Web page
(c) Active Web Page (d) All of the above.
- (iii) Predict the output of the following JavaScript code.
<script type="text/javascript">
a = 5 + "5";
document.write(a);
</script>
(a) 10 (b) Compilation Error
(c) 55 (d) Run Time Error.
- (iv) What is cell padding?
(a) Used to set space between cells
(b) Used to separate cell walls from their contents
(c) Both a and b above
(d) Used to provide width to a cell.
- (v) Which is considered as a disadvantage of using CSS?
(a) Save time (b) Page load faster
(c) Easy maintenance (d) Browser compatibility
- (vi) What is the effect of this CSS rule P:first-line {font-style: small-caps}?
(a) Converts the content of a paragraph into capital letters
(b) Converts the first line of a paragraph to small capital letters

- (c) Converts the content of a page to small capital letters
- (d) No visible effect.
- (vii) Which attribute of tag link the tag with corresponding <map> tag?
(a) usemap (b) usearea (c) linkmap (d) none of them.
- (viii) DOM stands for
(a) Data Object Model (b) Document Object Model
(c) Design Object Model (d) Domain Object Model.
- (ix) Cookie is created and sent by
(a) Web browser (b) Web server
(c) Application server (d) Database server.
- (x) Which of the following is the correct way to add background color in HTML?
(a) <body color = “green”>
(b) <body bg-color = “green”>
(c) <body style = “background-color=green”>
(d) <body style = “background-color: green;”>.

Group - B

- 2. (a) Why is Tiered architecture important and how many Tiers can an architecture have?
 - (b) What are the differences between client side scripting and server side scripting?
 - (c) What is an IFRAME?
 - (d) A webpage has an IFRAME and a link. On clicking the link, a webpage (say google) opens inside the IFRAME. Write down the code for the same.
- 3 + 3 + 2 + 4 = 12**
- 3. (a) What are CSS selectors?
 - (b) Mention and explain in brief at least 4 categories of selectors with examples.
 - (c) What is the use of repaint() method in a java applet?
 - (d) Why should the update() method of applet never be called directly unless absolutely necessary?

2 + 4 + 3 + 3 = 12

Group - C

- 4. (a) Design a registration form with two fields - Name and email. Write the javascript code to validate the following -
 - (i) Name should contain alphabets only
 - (ii) Email should be of the format something@somethingelse.com.
 - (iii) None of the fields can be empty.

- (b) Write the XML corresponding to a book store. Take at least two books as example.
- (c) What is the utility of XML schema? Write the XML schema for the book store XML written in answer to part b of this question.

6 + 3 + (1 + 2) = 12

5. (a) Write a javascript explicit regular expression to validate email and phone number. Phone no must be only numbers and email must have the format like abc@gmail.com.

In the following Code snippet, can you please predict the output, or, if you get an error, please explain the error?

```
<!DOCTYPE html>
<html>
<body>
<h2> <strong> Sample: Software Testing Help</strong> </h2>
<p id="sum_first"></p>
<p id="sum_second"></p>
<script>
var sum_first =50+20+' Sajeesh Sreeni ';
var sum_second= " Sajeesh Sreeni "+50+20;
document.getElementById("sum_first").innerHTML = "The first varaible sum is :"+sum_first +"<br>The second varaible sum is :"+sum_second ;
</script>
</body>
</html>
```

- (b) Write a simple servlet program which will return the current date and time.

(2 + 2) + (3 + 5) = 12

Group - D

6. (a) Explain the steps of creating the web page by web server when you request a JSP page from your browser.
- (b) Write a Scriptlet in JSP to show the current date using appropriate page directive.
- (c) What are JSP actions? Give the general syntax for defining an action in JSP. Name some of the most widely used actions in JSP.
- (d) Explain the use of forward action in JSP with an example.
- (e) Say you have developed two JSP pages date.jsp and index.jsp. Write the syntax for inserting the date.jsp in index.jsp when user requests the index.jsp.

4 + 2 + 2 + 2 + 2 = 12

7. (a) What is the difference between Prepared and Callable statements?

- (b) Assume a table EMP [fields: ID, NAME, SALARY, AGE] in mySql in your localhost. Now do the following from your Java file:-

- (i) Register the JDBC driver
- (ii) Open a connection
- (iii) Execute a query to find out the Employees above 40 years of age who get salary above Rs 10,000 per month
- (iv) Display the result
- (v) Close the connection.

$$3 + (1 + 1 + 4 + 2 + 1) = 12$$

Group - E

8. Write short notes on —

- (i) Phishing (ii) Trojan Horse (iii) Spoofing

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

9. (a) What is the purpose of the SSL alert protocol?
(b) What is a worm? How does it differ from a virus?
(c) What is packet filtering firewall? Briefly explain its working principle.

$$4 + (2 + 2) + (1 + 3) = 12$$

Department & Section	Submission link:
CSE A + B + C	https://classroom.google.com/c/NTY1MDE2Nzg5NDFa/a/Mjc0MDg4MTE5NDg3/details