

**WEB TECHNOLOGIES
(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) Cookies are stored in
 - (a) Web server
 - (b) Web browser
 - (c) Application server
 - (d) Database server.
 - (ii) A web client sends a request to a web server. The web server transmits a program to that client and is executed at client. It creates a web document. What are such web documents called?
 - (a) Static Web page
 - (b) Dynamic Web page
 - (c) Active Web Page
 - (d) Passive Web Page.
 - (iii) Which of the following is not a valid CSS selector?
 - (a) Attribute
 - (b) Element
 - (c) Class
 - (d) ID.
 - (iv) Which object is the top of the hierarchy of HTML DOM?
 - (a) Window Object
 - (b) Form Object
 - (c) Document Object
 - (d) Form Control Elements.
 - (v) Which of the following statements is false?
 - (a) A servlet can be invoked through a JavaScript
 - (b) A servlet can be invoked through an applet
 - (c) A servlet is executed on the server side
 - (d) A servlet instance is created for each client request.
 - (vi) Which JDBC driver Type(s) can be used in either applet or servlet code?
 - (a) Both Type 1 and Type 2
 - (b) Both Type 1 and Type 3
 - (c) Both Type 3 and Type 4
 - (d) Type 4 only.
 - (vii) In tunnel mode IPsec protects the
 - (a) entire IP packet
 - (b) IP header
 - (c) IP payload
 - (d) none of the mentioned.

- (viii) Identify the correct order in which the following actions take place in an interaction between a web browser and a web server.
1. The web browser requests a webpage using HTTP.
 2. The web browser establishes a TCP connection with the web server.
 3. The web server sends the requested webpage using HTTP.
 4. The web browser resolves the domain name using DNS.
- (a) 4,2,1,3 (b) 1,2,3,4 (c) 4,1,2,3 (d) 2,4,1,3
- (ix) SSL layer is located between
- (a) transport layer, network layer (b) application layer, transport layer
- (c) data link layer, physical layer (d) network layer, data link layer.
- (x) What is the correct JavaScript syntax to write "Hello World"?
- (a) ("Hello World") (b) "Hello World"
- (c) Response.write("Hello World") (d) Document.write("Hello World").

Group- B

2. (a) Write a html document to create a Job registration form,
- (i) Create text boxes for Name, Address, Phone, Email.
 - (ii) Create two radio buttons for Gender specification.
 - (iii) Create a textarea for additional information.
 - (iv) Create username and password for future login.
 - (v) Create submit and reset buttons.
- (b) Write the difference between GET and POST method.
- [[C01](Understand/LOCQ)]
9 + 3 = 12
3. (a) What is the difference between static and dynamic web page? What do you mean by Active Web page?
- (b) Write a external css file with following : Style text in <h1> to uppercase letters, and text in <p> to capitalized letters. Set "gradient_bg_vertical.png" as the background image of the page, and repeat it vertically only. Use the margin property to set the top and bottom margins for <h1> to "50px", and left and right margins to "25px".
- [[C01](Understand/LOCQ)]
(3 + 2) + 7 = 12

Group - C

4. (a) Write the differences between SAX and DOM parser.
- (b) Write a DTD and XML for the following customer data
- Customer id
 - Customer name(first and last name must be specified)
 - Mobile no(can be more than one)
 - Address (must contain 3 fields- state, pin, country)

- Credit Card (credit card no and type(domestic and international) must be specified. [[C04](Remember/LOCQ)]

3 + (5 + 4) = 12

5. (a) Why a session object is considered more secure and advantageous than cookie ?
[[C02,C03](Understand/HOCQ)]
- (b) Write a JavaScript function that accepts a string as a parameter and find the longest word within the string. Example string : 'Web Development Tutorial'
Expected Output : 'Development'. [[C01](Remember/LOCQ)]
- (c) Write a javascript explicit regular expression to validate the phone number. Phone no must be only numbered and can have exactly 10 digits.
[[C01](Remember/LOCQ)]
- 3 + 5 + 4 = 12**

Group - D

6. (a) Write a simple jsp program which will return the current date and time.
[[C03](Remember/LOCQ)]
- (b) How is a JSP different from that of a Servlet? Explain the lifecycle of JSP.
[[C03](Remember/LOCQ)]
- 6 + (2 + 4) = 12**
7. (a) 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 getConnection.
[[C03] (Remember/LOCQ)]
- (b) What is a directive in JSP? Name and very briefly explain the need of different JSP directives.
[[C03](Understand/HOCQ)]
- 6 + (2 + 4) = 12**

Group - E

8. (a) Briefly describe IPSec Architecture. Differentiates between transport and tunnel modes of operation of IPsec.
[[C06](Remember/IOCQ)]
- (b) What is the difference between static packet filter firewall and dynamic packet filter firewall?
[[C06](Understand/LOCQ)]
- (4 + 3) + 5 = 12**
9. Write Short Notes on. **(3 × 4) = 12**
- (i) Phishing
- (ii) Trojan Horse
- (iii) Spoofing. [[C05] (Understand/LOCQ)]
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Cognition Level	LOCQ	IOCQ	HOCQ
Percentage distribution	20	41	39

Course Outcome (CO):

After the completion of the course students will be able to

1. Students will be able to understand the basic tags of HTML, CSS, java script and DHTML.
2. Students will be able to connect a server side program using servlet and JSP to a DBMS and perform insert, update and delete operations on DBMS table.
3. Students will be able to write a server side programming using servlet and JSP to store the data sent from client, process it and store it on database.
4. Students will be able to prepare a well formed / valid XML document, schema to store and transfer data.
5. Students will be able to understand various types of attacks and their characteristics.
6. Students will be able to get familiar with network security designs using available secure solutions (such as PGP, SSL, IPsec)

*LOCQ: Lower Order Cognitive Question; IOCQ: Intermediate Order Cognitive Question; HOCQ: Higher Order Cognitive Question