

**ADVANCED JAVA & WEB TECHNOLOGY
(INFO 3203)**

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 constructor can be used for a servlet?
(a) Initialization (b) Constructor function
(c) Initialization and Constructor function (d) Setup() method
 - (ii) In JSP Action tags which tags are used for bean development?
(a) jsp:useBean (b) jsp:setProperty
(c) jsp:getProperty (d) All mentioned above
 - (iii) Which two interfaces does the javax.servlet.jsp package have?
(a) JspPage (b) HttpJspPage
(c) PageContext (d) Both a & b
 - (iv) How is the dynamic interception of requests and responses to transform the information done?
(a) servlet container (b) servlet config
(c) servlet context (d) servlet filter
 - (v) Which attribute is used to provide an advisory text about an element or its contents?
(a) tooltip (b) dir
(c) title (d) head
 - (vi) Which of the following is the attribute that specifies additional horizontal space, in pixels, to be reserved on either side of an embedded item like an iframe, applet, image, and so on?
(a) height (b) hspace
(c) hidefocus (d) datasrc
 - (vii) Which of the following property is used to make a font italic or oblique?
(a) font-family (b) font-style
(c) font-variant (d) font-weight

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- (viii) How do you create a function in JavaScript?
(a) `function=myFunction()` (b) `function:myFunction()`
(c) `function myFunction()` (d) none
- (ix) Which are the main features of XML?
(a) Text data description
(b) Human- and computer-friendly format
(c) Handles data in a tree structure having one-and only one-root element
(d) All mentioned above
- (x) What is the correct way to write a JavaScript array?
(a) `var colors=["red","green"]` (b) `var colors="red","green"`
(c) `var colors=[1:"red",2:"green"];` (d) All

Group - B

2. (a) HTTP is stateless, connection less, media independent protocol---Justify.
(b) Write HTML code for dividing the browser window into two horizontal parts (left part is content and right part is main). Left part should contain the anchors clicking on which corresponding page to be displayed at the right part. Clearly state the assumptions regarding the developed code.
 $(2 + 2 + 2) + 6 = 12$
3. (a) Explain different types of CSS with example.
(b) Write a Java swing program to develop a simple calculator.
 $6 + 6 = 12$

Group - C

4. (a) Why java script is called lightweight and why it is considered as scripting language?
(b) Write a java script function which will print the maximum and minimum value from an array of integers. Design suitable HTML form also.
 $(2.5 + 2.5) + 7 = 12$
5. (a) Compare Servlet and CGI technology. What are servlet packages?
(b) Differentiate between doGet and doPost method? Create a servlet program where cookie will be created for a First Name, Last Name, Age. Set the expiry of cookie after 24 hours of creation.
 $(3 + 2) + (2 + 5) = 12$

Group - D

6. (a) Draw and explain JSP lifecycle. How JSP differs from Servlet?

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(b) Write a JSP code to find out the prime numbers between 1 to N. N must be user input.

(4 + 3) + 5 = 12

7. (a) What are the common JDBC components available in JSP? Write a JSP application to show create, store and update operation in a database.

(b) Discuss about various Action Tag present in JSP.

(2 + 5) + 5 = 12

Group - E

8. (a) What are the benefits of EJB? What are the roles of stub and skeleton?

(b) What is JNI's full form and what purpose does it serve? State the difference between DOM and SAX parser.

(3 + 3) + (3 + 3) = 12

9. (a) Differentiate between XML elements and attributes with example. What are the five elements provided by Java RMI?

(b) Create an XML document that describes your details in the following hierarchy:

Name: LastName
 FirstName
 MiddleName
Date of Birth: DD/MM/YYYY
Fathers' name: LastName
 FirstName
 MiddleName
Mothers' name: LastName
 FirstName
 MiddleName
Address: Country
 State
 City
 Pin
Phone: CountryCode
 AreaCode
 PhoneNumber
Hobby:

(3 + 3) + 6 = 12

Department & Section	Submission Link
IT	https://classroom.google.com/c/MzY5MjQ0Njk3NzY1/a/MzY5MjQ0Njk3NzY1/details