

**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) The doGet() method extracts values of the parameter's type and number by using _____

(a) request.getParameter()	(b) request.setParameter()
(c) response.getParameter()	(d) response.getAttribute()
 - (ii) From which tag descriptive list starts?

(a) <LL>	(b) <DD>	(c) <DL>	(d) <DS>.
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 - (iii) Which of the below is not a session tracking method?

(a) URL rewriting	(b) History	(c) Cookies	(d) SSL sessions.
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 - (iv) Why JavaScript (JS) is called as lightweight programming language?

(a) because JS can provide programming functionality inside but up to certain extent
(b) because JS is client side scripting
(c) because we can add programming functionality inside JS
(d) because JS is available free of cost.
 - (v) Java Script code can be called by using _____.

(a) RMI	(b) triggering event
(c) pre-processor	(d) function/method.
 - (vi) What is the difference between servlets and applets?

i. Servlets execute on server; applets execute on browser	
ii. Servlets have no GUI; applet has GUI	
iii. Servlets creates static web pages; applets creates dynamic web pages	
iv. Servlets can handle only a single request; applet can handle multiple requests	
(a) i, ii, iii are correct	(b) i, ii are correct
(c) i, iii are correct	(d) i, ii, iii, iv are correct.

- (vii) When destroy() method is called in Servlet?

(a) The destroy() method is called only once at the end of the life cycle
(b) The destroy() method is called after execution of doFilter method
(c) The destroy() method is called only once at the beginning of the life cycle
(d) The destroy() method may be called at anytime of the life cycle.
- (viii) How can we invalidate a session?

(a) session.discontinue()	(b) session.invalidate()
(c) session.disconnect()	(d) session.falsify()
- (ix) Which one is the correct order of phases in JSP life cycle?

(a) Initialization, cleanup, compilation, execution
(b) Initialization, compilation, cleanup, execution
(c) Compilation, initialization, execution, cleanup
(d) Cleanup, compilation, initialization, execution.
- (x) What types of messages are supported by JMS?

(a) Object messages	(b) Text Messages
(c) Map messages	(d) all of these.

Group - B

2. (a) Why HTTP is called stateless, connectionless, media independent protocol? What is the default port number of http?

(b) What are the different selectors present in CSS? Explain with example.	(2 + 2 + 2 + 1) + 5 = 12
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3. (a) Differentiate between applet and swing? Write a Java swing program which will accept two values in text boxes and display addition result in third text box.

(b) With the help of an example explain HTML frame. State the disadvantages of using frame.	(3 + 4) + (3 + 2) = 12
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Group - C

4. (a) Write a Java script code which will check whether an email id is valid or not. Consider all possible cases.

(b) How can a session be created? Explain with example. With the help of an example show how a function can be called using Event Listener.	5 + (4 + 3) = 12
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5. (a) Compare CGI and Servlet. CGI is heavyweight and Servlet is lightweight — explain.
(b) What is cookie? How can it be created?
(4 + 3) + (2 + 3) = 12

Group - D

6. (a) Draw and explain JSP life cycle.
(b) Write a JSP code which is used to read the value of check boxes from an HTML page and display the value. Write all necessary assumptions.
(2 + 4) + 6 = 12
7. (a) Compare JSP and ASP. What is include directive and how does it work?
(b) Using JSP and JDBC technology create a form that is submitted along with user name department and password. List of borrowed library books and due date will be shown if the submitted details are correct.
(3 + 3) + 6 = 12

Group - E

8. (a) What are the five elements provided by Java RMI? Describe the tasks performed by stub in RMI application.
(b) Explain 3-tier architecture of J2EE. State the advantages of 3-tier architecture over 2-tier architecture.
(3 + 3) + (3 + 3) = 12
9. (a) Create an XML document that describes your details CV.
(b) What is the difference between EJB and Java Bean? What are the advantages of element over an attribute of an XML document?
6 + (3 + 3) = 12