

Department of Information Technology, Jadavpur University
B. E. Information Technology 3rd year, 2nd Semester Examination – 2023
Subject: **Web Technologies-II**

Time: Three hours

Full Marks: 100

Different parts of the same question should be answered together. Answer to-the-point and avoid irrelevant answers

CO1 [20]	<p>[1] Answer either (a) or (b) in this block</p> <p>(a) [4+8+8]</p> <p>i) Compare and contrast client-side and server-side validation of forms.</p> <p>ii) What is a war file? How to create a war file?</p> <p>iii) What is long polling? Write its relative advantages and disadvantages.</p> <p>(b) [4+8+8]</p> <p>i) Write the name of two web servers.</p> <p>ii) Show how hidden field can be used for session tracking.</p> <p>iii) What security issues should you be aware of while working with server-side code?</p>
CO2 [20]	<p>[2] Answer either (a) or (b) in this block</p> <p>(a) [4+8+8]</p> <p>i) Write the names of four JSP implicit objects with their scope?</p> <p>ii) Show how to create and use a bean in JSP. What are the 3 tags used in JSP bean development?</p> <p>iii) List the differences between include directive and include action tag.</p> <p>(b) [4+8+8]</p> <p>i) What is the major difference between ServletContext and PageContext?</p> <p>ii) List down the major differences between the JSP Custom Tags and Java Beans.</p> <p>iii) What are the attributes on page directives?</p>
CO3 [20]	<p>[3] Answer either (a) or (b) in this block</p> <p>(a) [4+8+8]</p> <p>i) Write different types of JDBC drivers with their relative merits and demerits.</p> <p>ii) What do you mean by DatabaseMetaData? Demonstrate with an appropriate example.</p> <p>iii) Explain JDBC Batch processing with a suitable example.</p> <p>(b) [4+8+8]</p> <p>i) What is SQL injection? Explain with examples.</p> <p>ii) How to mitigate the SQL Injection risks?</p> <p>iii) Explain the difference between execute(), executeQuery() and executeUpdate() methods in JDBC.</p>

[Turn over

CO4 [20]	<p>[4] Answer either (a) or (b) in this block</p> <p>(a) [4+8+8]</p> <p>i) Write the advantages of CGI programming over other server-side programming techniques.</p> <p>ii) How does a web server identify that a URL is for a CGI script?</p> <p>iii) Write a CGI program/script (in any language) that retrieves two integer values passed to it and returns the sum of them.</p> <p>(b) [4+8+8]</p> <p>i) Which computer languages are generally used to write CGI scripts?</p> <p>ii) What are the steps involved in configuring a server using CGI programming?</p> <p>iii) Show how to pass JavaScript variables to a CGI program. Also show how to access them.</p>
CO5 [20]	<p>[5] Answer either (a) or (b) in this block</p> <p>(a) [4+8+8]</p> <p>i) What are the advantages of Web Services?</p> <p>ii) Write the pros. and cons. of Microservices Architecture.</p> <p>iii) What is the difference between XMLRPC and SOAP?</p> <p>(b) [4+8+8]</p> <p>i) Briefly write the operational principle of XML-RPC.</p> <p>ii) Write with examples the format of XML-RPC request and response messages</p> <p>iii) Write with examples the format of a SOAP message.</p>

CO1: **Explain, differentiate** and **recognize** different server-side web programming techniques

CO2: **Sketch** server-side programs and **apply** Java based technologies to **solve** them

CO3: **Apply** Java-based technologies to **develop** server-side programs to work with databases

CO4: **Apply** CGI based technologies to **develop** server-side programs

CO5: **Describe** and **illustrate** service discovery in web frameworks
