

(2 ½ Hours)

[Total Marks:75]

- N.B: (1) All questions are compulsory.
(2) Figures to the right indicate marks.
(3) Illustrations, in-depth answers and diagrams will be appreciated.
(4) Mixing of sub-questions is not allowed.

- Q1. Attempt the following (any THREE): (15)**
- (A) What are cookies? Explain how servlets reads data from cookies?
 - (B) Write a servlet program that accepts students name and qualification from an HTML file. If qualification is BSC, then it redirects the user to "GRADUATE.html", if its MSC then it redirects the user to "POSTGRADUATE.html".
 - (C) Explain Servlet Life Cycle in detail.
 - (D) Write a short note on HttpSession interface.
 - (E) What is filter? Explain various parameters of doFilter().
 - (F) Write a servlet file which will display message if a number N is Odd or Even. Number N is accepted from input.html.
- Q2. Attempt the following (any THREE): (15)**
- (A) What is JSP? List and explain any three advantages of using JSP over Servlets.
 - (B) How JSP files are executed by web server?
 - (C) Write a JSP program to compute square of all numbers from 22 to 12.
 - (D) Explain the following- request, session, config, application, pageContext.
 - (E) Explain the advantages of using unified expression language.
 - (F) Explain exception handling in java server pages with suitable example.
- Q3. Attempt the following (any THREE): (15)**
- (A) Discuss the various ways of passing parameters to EJB.
 - (B) Explain the role of message listener in detail.
 - (C) State and explain any two annotations used for developing EJB.
 - (D) Explain the life cycle of Stateful Session bean.
 - (E) Differentiate between session beans and message driven beans.
 - (F) Write a short note on -types of EJB.
- Q4. Attempt the following (any THREE): (15)**
- (A) Write a web service which will return factorial of number passed to it.
 - (B) Discuss various important factors to be considered before giving remote or local access to the enterprise beans.
 - (C) Explain the basic steps for creating a web service and client.
 - (D) Write a web service method that accepts two numbers m and n, and return m^n .
 - (E) Discuss the characteristics of remote client and local client in a session enterprise bean.
 - (F) Explain @WebMethod and @WebService in detail.
- Q5. Attempt the following (any THREE): (15)**
- (A) What is the role of ServletContext and HttpServletRequest? State some important methods of these classes.
 - (B) Explain any five JSP Actions.

- (C) Discuss the benefits of EJB.
- (D) Write a short note on -Web service clients.
- (E) Write a servlet which allows user to add new records to table C_AREA (RADUIS, AREA). A value for RADIUS is passed through HTML, and corresponding AREA is computed. Also write the code for HTML Document.
- (F) Discuss the content of an enterprise bean.

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