

Q.P. Code : 14598

(2½ Hours)

[Total Marks : 75]

- N.B. : (1) All questions are compulsory.
 (2) Figures to the right indicate full 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) Write a short note on life cycle of a Servlet.
 - (B) Explain any four methods of HttpServletRequest interface.
 - (C) What is the role of a Filter in Servlets? Explain various parameters of doFilter() method.
 - (D) Write a Servlet which accepts EMPNO, NAME and CONTACTNO sent from a HTML document (employee.html) and display them on screen. Also give the code for employee.html document.
 - (E) Write a Servlet file which will display if a number N is prime or not. Number N is accepted from prime.html.
 - (F) Write a Servlet which allows user to add new records to a table 'unmpwd'. Values for username and password are passed through HTML.

- Q2. Attempt the following (any THREE): 15
- (A) Explain how control can be transferred from JSP to another web component with code snippet.
 - (B) Explain error handling mechanism in JSP with code snippet.
 - (C) Explain jsp:useBean tag with example.
 - (D) Write a short note on Unified Expression Language.
 - (E) Write a Java Server Page to display current date. Also display the counter showing number of times the JSP was requested.
 - (F) Write a Java Server Page which displays value of m to the power of n (m^n) where m and n are accepted from numbers.html.

- Q3. Attempt the following (any THREE): 15
- (A) What is Enterprise Java Bean? Explain any four benefits of EJB.
 - (B) State the difference between Java Beans and EJB.
 - (C) State the contents of Enterprise Bean. Also state their naming conventions.
 - (D) What are various ways of passing parameters in EJB?
 - (E) Differentiate between Session Bean and Message Driven Bean.
 - (F) What is MessageListener? Also explain onMessage() method.

Q4. Attempt the following (any THREE): 15

- (A) What factors should be considered before giving local or remote access to beans?
- (B) What are the characteristics of a Remote Client of an Enterprise Bean? What are the different ways to create an enterprise bean that allows remote access?

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- (C) State and explain callback methods of Stateless Session Bean.
- (D) Explain the use of (i) @WebMethod (ii) @WebParam.
- (E) Explain the following terms:
 - (i) SOAP, (ii) UDDI and (iii) WSDL.
- (F) Write a web service method that accepts a number n and returns the value of $1+2+3+\dots+n$.

Q5. Attempt the following (any THREE):

- (A) Differentiate between GenericServlet and HttpServlet.
- (B) Explain any five JSP elements.
- (C) What are implicit objects? State and explain any four.
- (D) Explain the life cycle of Stateful Session Bean.
- (E) What are annotations? Explain any two annotations used for developing EJB.
- (F) Write a short note on JAX-WS technology.