Q. P. Code: 38716

[Total Marks: 80]

(3 Hours)

N.B.: 1) Question No.1 is **compulsory.**
2) Attempt any **three** from the remaining **five** questions.

Q. 1. Attempt **_any four_** :- 20

(a) Explain Custom tags in JSP

(b) Explain Wrapper Class

(c) Differentiate between Java and c++

(d) Explain concept of Object Serilization and Deserilization

(e) Explain Servlet Life cycle

Q. 2. (a) What is Cookie? Write a servlet program to count number of page visits using cookie. (10)

(b) Explain Lambda Expression with suitable example. (10)

Q. 3. (a) Explain Event Delegation model. Explain ActionListener and MouseListener interface. (10)

(b) Describe steps involved for User defined exception with suitable example. (10)

Q. 4. (a) Why do we need Generics? Explain with an example of how Generics make a program more flexible? (10)

(b) Describe Spring Framework in detail. (10)

Q. 5. (a) Explain JSP architecture with diagram. (10)

(b) List out available drivers in JDBC. Explain in detail. (10)

Q. 6. (a) Explain Thread Lifecycle with neat labeled diagram. Write a program to demonstrate thread lifecycle. (10)

(b) Why java doesn't support multiple inheritances? Write a program to demonstrate use of interface. (10)

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