M.E. Second Semester (Information Technology) (Full Time) (C.G.S.) -
13427 : Integrative Programming : 2 NMEF 1

P. Pages : 2

Time : Three Hours

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AX - 3477

Max. Marks : 80

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Notes : 1. Illustrate your answer necessary with the help of neat sketches.
2. Use of pen Blue/Black ink/refill only for writing book.

1. a) Define **6**

    i) Persistent objects

    ii) Cloning objects.

    iii) Nested objects.

   b) Explain the model-view-controller design pattern. **7**

OR

2. a) Explain the role of finalizer: Explain how to define a finalize method and what type of access specifiers can be used with finalizers. **7**

   b) Explain in detail, difference of byte oriented stream and character stream. **6**

3. a) What is a thread? Explain how to create a thread using thread class and Runnable interface. **7**

   b) Explain how SUM can be used to schedule task. **6**

OR

4. a) Explain life cycle of thread using state transition diagram. **6**

   b) Explain how JVM can be used to schedule task. **7**

5. a) What is connection pooling. How connection pooling mechanism work for distributed transaction. **7**

   b) Explain various transaction isolation levels in the connection class. **7**

OR

6. a) Differentiate between **7**

    i) Server Socket and client Socket

    ii) Listening method and communication mode.

   b) Explain in detail the result set object and its types. **7**

7. a) Explain why it is necessary to parse XML document. Explain briefly the important features of DOM parser and SAX parser.   7

   b) Differentiate between: 6

      i) XHTML and XML

      ii) Well-formed document and valid document.

      iii) Document and DTD.

OR

8. a) Compare validating XML documents using DTD and XML schema.   7

   b) Explain with an example how to components are referenced using namespace.   6

9. a) Describe the security manager object used in RMI far protection against unauthorized access.   7

   b) Explain the secure Socket layer Handshake.   6

OR

10. a) Explain the TCP/IP Sockets and Datagram Sockets.   6

    b) What is meant by Remote method Invocation? Explain the steps in RMI clearly indicating the meaning of stub and skeleton.   7

11. a) Explain in detail the relationship between server and application server.   7

    b) Explain main classes of JSP API.   7

OR

12. a) Explain the life cycle of a servlet. Explain purpose of various methods.   7

    b) Enumerated and explain the purpose of at leant five classes and two interfaces related to generic servlet implementation.   7

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