

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

P. Pages : 2

Time : Three Hours



**AW - 3748**

Max. Marks : 80

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

1. a) Explain the model-view-controller Design Pattern. 7  
b) What is object cloning? How to make object cloneable. 6

**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) Define: 6  
i) Persistent objects  
ii) Cloning objects  
iii) Nested classes  
3. a) Explain how sum can be used to schedule task. 7  
b) Explain what is synchronization? What is the need of it. 7

**OR**

4. a) Give and explain the state transition diagram of a thread. Describe the method of a thread class that are used for transition from one state to another. 7  
b) Explain with suitable examples, under what situations it is better. 7  
i) To use of a thread or a process.  
ii) To synchronize thread or not to synchronize.  
5. a) Explain in detail the result set object and its types. 7  
b) Explain- 6  
i) Connection Pool  
ii) Two-phase commit  
iii) Type-2 JDBC Driver for RDBMS system

**OR**

6. a) Differentiate between: 6  
i) Server socket and client socket.  
ii) Listening method and communication mode.  
b) Explain various transaction isolation levels in the connection class. 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) State and explain rules for writing XML. 6

**OR**

8. a) Explain with an example how the components are referenced using Namespace. 7
- b) Compare validating XML documents using DTD and XML schema. 6
9. a) Explain the symmetric and Asymmetric cryptographic systems. 7
- b) Explain the TCP/IP sockets and Datagram Sockets. 6

**OR**

10. a) Differentiate between. 6
- i) Socket and Port
  - ii) Listening mode and communication mode
  - iii) Server Socket and Client Socket
- b) Explain the Secure Socket-Layer Handshake. 7
11. a) Explain the following. 7
- a) JSP as HTML or XHTML document.
  - b) JSP as XML Document
- b) Explain in detail the relationship between server and application server. 7

**OR**

12. a) Explain with a neat diagram how a web app. Process HTTP requests. 7
- b) Enumerate and explain the purpose of at least five classes and two interfaces related to generic servlet implementation. 7

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