G 6562 (Pages : 2) Reg. No.....

Name.....

M.TECH. DEGREE EXAMINATION, MARCH 2011

Second Semester

Branch : Computer Science and Engineering/Information Systems

DATABASE TECHNOLOGY

Time : Three Hours Maximum : 100 Marks

Part A

Answer **all** *questions.*

Each question carries 4 *marks.*

1. Explain Indexing and Hashing.
2. How does unstructured complex object differ from structured complex object?
3. Explain Distributed systems.
4. Write the significance of Multimedia databases.
5. Briefly explain Data Mining.

(5 × 4 = 20 marks)

Part B

Answer **all** *questions.*

Each full question carries 16 *marks.*

6. (a) Explain Extendable Hashing with examples.

   (b) Briefly explain the factors that affect Physical Database design.

(8 + 8 = 16 marks)

Or

   (c) Explain briefly the Query optimization technique.

   (d) Write a note on Database security.

(8 + 8 = 16 marks)

7. (a) Explain the centralized and client-server architectures in detail.

Or

   (b) With a case study, explain the 3 tier client server architecture.

(16 marks)

Turn over

8. (a) Explain briefly the ODMG model.

(b) Write briefly the object relational features in SQL.

(8 + 8 = 16 marks)

Or

(c) Explain the object oriented capabilities included in SQL 99 with examples.

(d) What are complex objects?

(12 + 4 = 16 marks)

9. (a) Explain the significance of Temporal and Spatial databases and illustrate their roles.

Or

(b) Explain the XML data model.

(c) Write a note on Genome Data Management.

(8 + 8 = 16 marks)

10. (a) Explain briefly about web databases.

(b) What are Transaction Commit Protocols?

(c) Explain Data warehousing.

(5 + 5 + 6 = 16 marks)

Or

(d) Explain the effect of mobility on Data Management.

(e) Write briefly on Location and Handoff management.

(8 + 8 = 16 marks)

[5 × 16 = 80 marks]

G 6563 (Pages : 2) Reg. No.....

Name.....

M.TECH. DEGREE EXAMINATION, MARCH 2011

Second Semester

Branch : Computer Science and Engineering/Information Systems

COMPUTER NETWORKS

Time : Three Hours Maximum : 100 Marks

Part A

Answer **all** *questions.*

Each question carries 4 *marks.*

1. Explain the ATM Header structure.
2. Briefly explain the significance of UDP in inelastic traffic applications.
3. Briefly describe the concept of Remote monitoring.
4. Explain the functions of Network layer.
5. Describe the functions of Real Time Transport Protocol.

(5 × 4 = 20 marks)

Part B

Answer **all** *questions.*

Each full question carries 16 *marks.*

1. Explain the various congestion control and flow control mechanisms briefly.

(16 marks)

Or

2. Explain :
   (a) Shared media networks.
   (b) Classifications of switched networks.

(6 + 10 = 16 marks)

3. Explain the various traffic shaping algorithms in detail.

(16 marks)

Or

4. (a) Briefly explain the Best Effort Model and Guaranteed Service Model.
   (b) Illustrate the limitations of IP networks.

(10 + 6 = 16 marks)

Turn over

5. Explain the Integrated Services Architecture in detail.

Or

6. Explain in detail about Resource Reservation Protocol.

(16 marks)

7. Explain about :

   (a) Principles of ATM Networks.

   (b) ATM Traffic Management and Control Mechanisms.

(6 + 10 = 16 marks)

Or

8. Write briefly about :

   (a) WDM Systems.

   (b) Service categories and Traffic descriptors in ATM networks.

(8 + 8 = 16 marks)

9. Explain about :

   (a) CMIP.

   (b) Major changes in SNMP V2 and SNMP V3.

(8 + 8 = 16 marks)

Or

10. Explain in detail the Internet Control Message Protocol.

(16 marks)

[5 × 16 = 80 marks]

G 6564 (Pages : 2) Reg. No.....

Name.....

M.TECH. DEGREE EXAMINATION, MARCH 2011

Second Semester

Branch : Computer Science and Engineering

ADVANCED NETWORK PROGRAMMING (Elective II)

Time : Three Hours Maximum : 100 Marks

Part A

Answer **all** *questions.*
Each question carries 4 *marks.*

1. Explain JAVA Byte code.
2. What are URL classes ?
3. What is object serialization ? Explain.
4. Explain how multimedia data is stored in databases.
5. What is entity Beans ? Explain.

(5 × 4 = 20 marks)

Part B

Answer **all** *questions.*
Each full question carries 16 *marks.*

6. (a) Explain Java Native interfaces. (8 marks)
   (b) Briefly explain dynamic reflexive classes. (8 marks)

Or

7. (a) With on example explain Java swing. (8 marks)
   (b) What is meant by filter and pipe steams ? Explain. (8 marks)
8. What is a socket ? Explain different types of sockets used in Network programming in Java with examples. (16 marks)

Or

9. (a) Explain the procedure to read data from the server. (8 marks)
   (b) Briefly explain Java messaging services. (8 marks)
10. (a) Explain the activation models. (8 marks)
    (b) Explain RMI custom sockets. (8 marks)

Or

Turn over

11. (a) Explain different types of CORBA programming models. (8 marks)

(b) Discuss the procedure for JAR file creation. (8 marks)

12. (a) Briefly explain Java server pages. (8 marks)

(b) Explain applet to serlet communication. (8 marks)

Or

13. (a) Explain the implementation of storing multimedia data into data bases. (8 marks)

(b) Discuss on Java Media Framework. (8 marks)

14. (a) Briefly explain server side component Architecture. (8 marks)

(b) Explain in detail J2EE. (8 marks)

Or

15. (a) Explain with an example Persistent Entity Beans. (8 marks)

(b) Distinguish between session Beans and entity Beans. (8 marks)

[5 × 16 = 80 marks]

G 6566 (Pages : 2) Reg. No.....

Name.....

M.TECH. DEGREE EXAMINATION, MARCH 2011

Second Semester

Branch : Computer Science and Engineering

DATA WAREHOUSING AND DATA MINING (Elective III)

Time : Three Hours Maximum : 100 Marks

Part A

Answer **all** *questions.*
Each question carries 4 marks.

1. Define the term OLAP.
2. What is the need of data cleaning in data mining ?
3. Write notes on Lazy Learners.
4. What is meant by constraint based cluster analysis ?
5. Briefly explain multimedia datamining.

(5 × 4 = 20 marks)

Part B

Answer **all** *questions.*
All questions carry equal marks.

6. (a) Explain the different steps involved in building a dataware house. (16 marks)

Or

(b) Write notes on reporting on a datawarehouse. (8 marks)

(c) Explain the multidimensional data model of a data warehouse. (8 marks)

7. (a) Explain how data integration and transformation are performed in data mining. (16 marks)

Or

(b) Explain the term data discretization. (8 marks)

(c) Explain how association rules are used in correlation analysis. (8 marks)

8. (a) Write notes on rule based classification. (8 marks)

(b) What are support vector machines ? (8 marks)

Or

(c) Explain the working of a bayes classifier with example. (8 marks)

(d) Explain the use of ensemble methods in data mining. (8 marks)

Turn over

9. (a) Explain K-means clustering with an example. (8 marks)

(b) Briefly explain any *one* of the density based clustering algorithm. (8 marks)

Or

(c) What are the different grid based methods for cluster analysis. (8 marks)

(d) Explain how clustering is done on a high dimensional data. (8 marks)

10. (a) Briefly explain the data mining trends on world wide web. (16 marks)

Or

(b) What are the different methods for performing text data mining. (16 marks)

[5 × 16 = 80 marks]

G 6561 (Pages : 2) Reg. No..M.Tech...CS....

Name.....

M.TECH. DEGREE EXAMINATION, MARCH 2011

Second Semester

Branch : Computer Science and Engineering/Information Systems

COMPILER DESIGN

Time : Three Hours Maximum : 100 Marks

Part A

Answer **all** *questions.*
Each question carries 4 *marks.*

1. Discuss about the declarations and statements in ICAN.
2. Explain the issues in designing an intermediate language.
3. Explain in line expansion.
4. Write notes on symbolic and polymorphic language support.
5. Discuss the features of SPARC.

(5 × 4 = 20 marks)

Part B

Answer **all** *questions.*
Each full question carries 16 *marks.*

6. (a) Discuss the principles and properties of a compiler. (8 marks)

   (b) Explain Global symbol Table structure. (8 marks)

   Or

   (c) Explain the structure of optimizing compilers. (8 marks)

   (d) How optimization has been performed in optimizing compilers ? (8 marks)

7. (a) Briefly explain the representation of MIR, HIR and LIR in ICAN. (10 marks)

   (b) Write notes on partial redundancy elimination. (6 marks)

   Or

   (c) Write notes on value numbering and algebraic simplifications and reassociation. (10 marks)

   (d) Explain induction variable optimization briefly. (6 marks)

Turn over

8. (a) Discuss on graph colouring and Priority based graph colouring. (12 marks)

(b) Write notes on constant propagation. (4 marks)

Or

(c) Write notes on scalar replacement of array elements. (10 marks)

(d) Explain Tail merging or cross jumping. (6 marks)

9. (a) Write notes on software pipelining. (8 marks)

(b) Write notes on code sharing and position Independent code. (8 marks)

Or

(c) Explain local stack frame and run time stack. (8 marks)

(d) Discuss on instruction scheduling. (8 marks)

10. (a) Discuss about IBM XL compilers for the power and power PC architectures. (16 marks)

Or

(b) Briefly explain compiler testing tools. (16 marks)

[5 × 16 = 80 marks]