F 9891 (Pages : 2) Reg. No.....

Name.....

M.TECH. DEGREE EXAMINATION, FEBRUARY 2012

Second Semester

Computer Science and Engineering

OBJECT ORIENTED SOFTWARE ENGINEERING—(Elective III)

(Regular)

Time : Three Hours Maximum : 100 Marks

Part A

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

1. List the principles of Software Design.
2. What are the different types of Modeling ?
3. Explain the need of Project Communication.
4. Compare Agile Process Model and Other Process Models.
5. List and explain any four UML tools.

(5 × 4 = 20 marks)

Part B

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

6. (a) Compare classical and Object Oriented Paradigms in detail. (16 marks)

Or

(b) Explain Project Management in detail. (16 marks)

7. (a) Explain Unified process model with an example. (16 marks)

Or

(b) Discuss the different Software Life Cycle Process models. (16 marks)

8. (a) Define Object Oriented Modeling. What does UML provide to designers ? State the difference between UML state diagram and state transition diagram. (16 marks)

Or

(b) Prepare a design model for Hospital Management Software System using UML diagrams. (16 marks)

Turn over

9. (a) Explain how effective Interface Specification can be achieved for a Software Project and how Object constraint languages are helpful in the design of the Software Project.

(16 marks)

Or

(b) Discuss about System Design Architecture and the important design patterns available for the design.

(16 marks)

10. (a) What is Software Maintenance ? (8 marks)

(b) Explain the different testing strategies involved in Software development. (8 marks)

Or

(b) Explain how design is mapped with Implementation Code during Software development life cycle.

(16 marks)

[5 × 16 = 80 marks]

F 9892 (Pages : 2) Reg. No.....

Name.....

M.TECH. DEGREE EXAMINATION, FEBRUARY 2012

Second Semester

Computer Science and Engineering

DATA WAREHOUSING AND DATA MINING—(Elective)

(Regular/Supplementary)

Time : Three Hours Maximum : 100 Marks

Part A

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

1. Discuss the types of data used in cluster analysis.
2. What is a Data Warehouse ? What are the characteristics of a data warehouse ?
3. Write briefly on Lazy Learners.
4. Explain Multimedia data mining.
5. What is Data mining ?

(5 × 4 = 20 marks)

Part B

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

6. (a) (i) Explain the multi dimensional data model of a data warehouse. (8 marks)

   (ii) Discuss the different OLAP tools. (8 marks)

   Or

   (b) Discuss the decisions in the design of a data warehouse in detail. (16 marks)

7. (a) (i) Explain Data Mining functionalities in detail. (8 marks)

   (ii) Write a note on Data Discretization. (8 marks)

   Or

   (b) Explain the algorithm for mining frequent item sets, in detail. Give relevant example. (16 marks)

8. (a) (i) Discuss the issues regarding classification and prediction. (8 marks)

   (ii) Explain classification by Back Propagation. (8 marks)

   Or

   (b) (i) Explain the use of Ensemble method in Data mining. (8 marks)

   (ii) Discuss the various techniques for improving classifier accuracy. (8 marks)

Turn over

9. (a) (i) Explain clustering and the need for clustering. (8 marks)

(ii) Explain the Partitioning method and Hierarchial method in detail. (8 marks)

Or

(b) (i) Write a note on Outlier analysis. (8 marks)

(ii) Explain the different grid based methods for cluster analysis. (8 marks)

10. (a) Explain in detail about spatial data mining. (16 marks)

Or

(b) Discuss the different methods for performing Text data mining. (16 marks)

[5 × 16 = 80 marks]

F 9885 (Pages : 2) Reg. No.....

Name.....

M.TECH. DEGREE EXAMINATION, FEBRUARY 2012

Second Semester

Branch : Computer Science and Engineering/Information System

COMPILER DESIGN

(Regular/Supplementary)

Time : Three Hours Maximum : 100 Marks

Part A

Answer **all** *questions.*

Each question carries 4 *marks.*

1. State the importance of code optimization.
2. What is code hoisting?
3. Explain register coalescing graph coloring process with algorithm.
4. Write note on percolation scheduling.
5. Write note on classroom object oriented language.

(5 × 4 = 20 marks)

Part B

Answer **all** *questions.*

Each full question carries 16 *marks.*

6. (a) Describe the placement of optimization in Aggressive optimizing compilers.

   (b) Write notes on Data types and expressions in ICAN.

(10 + 6 = 16 marks)

Or

(c) Explain symbol table structure and its management.

(16 marks)

7. (a) Write note on sparse conditional constant propagation.

   (b) Describe KAN naming of data structures and routines that manipulate Intermediate code.

(8 + 8 = 16 marks)

Or

Turn over

(c) Describe the different methods of common subexpression elimination.

(d) Explain the concept of unnecessary bounds checking elimination.

(10 + 6 = 16 marks)

8. (a) Explain leaf routine optimization and shrink wrapping.

(b) Write note on Interprocedural data flow analysis.

(8 + 8 = 16 marks)

Or

(c) Briefly explain control flow and low-level optimizations.

(16 marks)

9. (a) Explain the concept of Instruction scheduling.

(b) Write note on code sharing and position Independent code.

(10 + 6 = 16 marks)

Or

(c) Explain local stack frame and routine stack.

(d) Explain speculative scheduling.

(10 + 6 = 16 marks)

10. (a) Discuss Digital equipment compilers for ALPHA.

(16 marks)

Or

(b) Discuss sun compilers for SPARE.

(16 marks)

[5 × 16 = 80 marks]

F 9886

(Pages : 2)

Reg. No.....1 Copy.....

Name.....

M.TECH. DEGREE EXAMINATION, FEBRUARY 2012

Second Semester

Branch : Computer Science and Engineering/Information System

DATABASE TECHNOLOGY

(Regular/Supplementary)

Time : Three Hours

Maximum : 100 Marks

Part A

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

1. Write a note on Distributed Query processing.
2. Describe the ODMG model.
3. Explain the effects of mobility on Data Management.
4. Explain briefly about I/O Parallelism.
5. Describe the role of spatial databases.

(5 × 4 = 20 marks)

Part B

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

6. (a) Enumerate the factors that influence the physical database design.
   (b) Explain briefly the Query processing algorithms.

Or

   (c) Explain how Transaction management is achieved illustrating the Transaction processing concepts.

7. (a) Explain the server system architecture.
   (b) Explain the distributed database architecture.

Or

   (c) Explain the locking protocols for concurrency control in distributed databases.
   (b) Explain briefly the concept Distributed data storage and distributed transactions.

8. (a) Describe ODL with example.
   (b) Explain the object relational features in Oracle.

Or

   (c) Describe the object oriented capabilities included in SQL99 with example.
   (d) Briefly explain object relational databases.

Turn over

9. (a) Explain the significance of Temporal databases.

(b) Write a note on Active database concepts and Trigger.

Or

(c) Briefly explain the XML schema concepts.

(d) Write a note on Genome Data management.

10. (a) Explain how location search and location update is performed.

(b) Write a note on Hand off management.

Or

(c) Explain briefly the mobile Transaction models.

(d) Briefly explain about Data warehousing and Data mining.

(5 × 16 = 80 marks)

F 9887 (Pages : 2) Reg. No.....

Name.....

M.TECH. DEGREE EXAMINATION, FEBRUARY 2012

Second Semester

Branch : Computer Science and Engineering/Information System

COMPUTER NETWORKS

(Regular/Supplementary)

Time : Three Hours Maximum : 100 Marks

Part A

Answer **all** *questions.*

Each question carries 4 *marks.*

1. Explain the functions of the Transport layer.
2. Briefly illustrate the limitations of IP Networks.
3. Explain CMIP.
4. Write the principles of ATM Networks.
5. Briefly explain RSVP.

(5 × 4 = 20 marks)

Part B

Answer **all** *questions.*

Each full question carries 16 *marks.*

6. Briefly explain the different kinds of flow control mechanisms.

(16 marks)

Or

7. Explain the layered network architecture in detail illustrating the significance of each layer.

(16 marks)

8. Explain in detail about the limitations of TCP and Low UDP is significant in inelastic traffic applications.

(16 marks)

Or

9. (a) Explain the Best Effort model.

   (b) Illustrate the scheduling and dropping policies for BE and GS models.

(8 + 8 = 16 marks)

Turn over

10. Explain in detail about Differentiated Services networks.

(16 marks)

Or

11. (a) Explain the principles and mechanisms involved in MPLS networks.

(b) Explain the Real Time Transport Protocol and RTP Control Protocol.

(8 + 8 = 16 marks)

12. Explain briefly about the ATM layers. Explain the significance of each layer.

(16 marks)

Or

13. Write briefly about :

(a) WDM systems and their significance in high speed networks.

(b) Traffic descriptors in ATM network.

(8 + 8 = 16 marks)

14. Write in detail about :

(a) Simple Network Management Protocol Communication Model.

(b) Major challenges in SNMP V2.

(10 + 6 = 16 marks)

Or

15. (a) Explain the need for Network Management.

(b) Explain about Internet Control Message Protocol.

(6 + 10 = 16 marks)

[5 × 16 = 80 marks]

F 9888 (Pages : 2) Reg. No.....Copy.....

Name.....

M.TECH. DEGREE EXAMINATION, FEBRUARY 2012

Second Semester

Computer Science and Engineering

ADVANCED NETWORK PROGRAMMING (Elective)

(Regular/Supplementary)

Time : Three Hours Maximum : 100 Marks

Part A

Answer **all** *questions, each question carries* 4 *marks.*

1. Explain Java swing.
2. Explain usage of UDP datagrams.
3. Explain JAR file creation.
4. Explain some of the serlet applications.
5. What is an entity beans ?

(5 × 4 = 20 marks)

Part B

Answer **all** *questions, each full question carries* 16 *marks.*

6. (a) Explain the concept of filter and pipe streams in Java. (8 marks)

   (b) Briefly explain byte code interpretation in Java. (8marks)

Or

7. (a) Briefly explain reflections in Java. (8 marks)

   (b) Explain with an example Java threading. (8 marks)

8. (a) What are sockets ? Distinguish secure sockets with custom sockets. (10 marks)

   (b) Discuss the telnet application. (6 marks)

Or

9. (a) Briefly explain URL classes. (8 marks)

   (b) Discuss in detail Java messaging services. (8 makrs)

10. (a) Explain in detail object serialization. (9 marks)

    (b) With an example explain naming services. (7 marks)

Or

Turn over

11. (a) Explain the implementation of RMI custom sockets. (8 marks)

(b) Explain with figure CORBA technology. (8 marks)

12. (a) Explain Applet to Applet communication. (8 marks)

(b) Explain the implementation of JDBC. (8 marks)

Or

13. (a) Discuss some of the multi media streaming applications. (8 marks)

(b) With an example explain Java server pages. (8 marks)

14. (a) Briefly explain session Beans. Bring out its advantages over entity beans. (9 marks)

(b) Write in detail about transactions. (7 marks)

Or

15. (a) Discuss the different types of persistent entity beans. (8 marks)

(b) With proper diagram explain server side component architecture. (8 marks)

[5 × 16 = 80 marks]