(3 Hours)  Total Marks: 100

**N.B.** (1) Question No. 1 is compulsory.
(2) Attempt any four from the remaining six questions.
(3) Figures to the right indicate full marks.

Q.1 (a) Explain how Exceptions are handled by Using try, catch, finally, throw and throws keyword with suitable Example. **[10]**

(b) Explain the different control statements used in Java with suitable example **[10]**

Q.2 (a) What is Inner Classes and Abstract Classes? Explain with Suitable java program & Example. **[10]**

(b) What is Interface? Write java program to implement interface. **[10]**

Q.3 (a) What is package? Write steps to Create package and explain Package Concept Using all the access modifiers with Suitable example. **[10]**

(b) Write a Java program to accept names from the user and arrange in ascending order **[10]**

Q.4 (a) State the five Layouts in Layout Manager for java AWT. Show the Layouts displayed by each of these Layout. **[10]**

(b) Write a program to display JLabel and JButton using JFrame in Swing. **[10]**

Q.5 (a) What is Multithreading? Explain with Suitable diagram Thread Life Cycle. **[10]**
(b) Explain Input Stream and Reader Classes. **[10]**

Q.6 (a) Write a Program to Create TextField, Checkbox, and Buttons, Labels, TextArea & List Using AWT package. **[10]**

(b) Describe Java Program Steps in order to get connectivity to database along with example. **[10]**

Q.7 Write short Notes on: (Any four) **[20]**
a) Java and C++
b) Constructor Overloading
c) Applet Life cycle
d) final keyword
e) Wrapper Classes

Sem- IV                                              Q. P. Code : 08680

(3 Hours)                              ( Total Marks : 100

N.B : 1. Questions **No. 1** is **compulsory**.
    2. Attempt **any four** out of remaining **six.**
    3. Elaborate **each** answer with the help of **an example**.

1.  (A)  Draw the class diagram and object diagram for the following scenarios :    10
          Consider a university database that keeps track of students and their majors, transcript and registration and the university courses. Several sections of each course are offered and each section is related to the instructor who is teaching. It also keeps track of the sponsored research projects of faculty and graduate students of the academic departments of the particular college. The database also keeps track of research grants and contracts awarded to the university. A grant is related to one principle investigator and to all researchers it supports.
  (B)  What is UML? What are the different views of UML?    10

2.  (A)  What are the different types of interaction diagram? Compare and contrast.    10
  (B)  Explain the bottom up approach for design software.    10

3.  (A)  What are swim lanes? Illustrate its use with example?    10
  (B)  Draw sequence diagram to IRCTC ticket booking with invalid net banking pin use.    10

4.  (A)  Explain reusability with respect to black box and white box framework.    10
  (B)  Explain the various techniques of Object oriented analysis and design.    10

5.  (A)  Explain noun phrase approach for developing class diagram. State the benefits and drawbacks.    10
  (B)  Describe EMA and explain all its components in detail.    10

6.  (A)  Explain 3-tier logical architecture    10
  (B)  Differentiate between sequence diagram and collaboration diagram?    10

7. Explain **any four** of the following terms :    20
  (A)  Cohesion
  (B)  Packages
  (C)  Concurrent states
  (D)  Generalization
  (E)  CRC cards

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(3 Hours) [Total marks: 100]

N.B. (1) Question 1 is compulsory.

(2) Attempt any four from remaining six.

(3) Assumption made should be clearly stated.

1. a. Define network security? What are the principles of network security? 10
   b. Explain in detail Privacy Enhanced Mail. 10

2. a Explain Man in the middle Attack with Example 10
   b. Explain different type of Attacks. 10

3. a. Explain IDEA with diagram. 10
   b. Explain the working of MD5. 10

4. a. What are firewalls? What are the advantages and limitations of firewalls 10
   b. Explain Message Authentication Code with the help of diagram 10

5. a. Explain SSL Architecture. 10
   b. What is an intrusion detection system? What are the various types of IDS? 10

6. a. Explain how Kerberos works. How is Kerberos V5 different from V4? 10
   b. Explain Secure Electronic Transaction in detail with diagram. 10

7. Write short notes on any four 20

   i) Certificate Revocation
   ii) Digital Envelop
   iii) IPSec
   iv) Smart Card
   v) Zero-Knowledge Proof System

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(3 Hours) [Total marks: 80]

Note (1) Question No. 1 is compulsory.
     (2) Attempt any four out of remaining six questions.
     (3) Answer to sub-questions should be grouped together.

Q1. (a) Write short notes on the following (Any Three)     12
    1. Data partitioned parallelism
    2. KDD Process
    3. Neural network
    4. Star Schema

(b) Differentiate between (Any Two)     8
    1. Parallel & distributed databases
    2. Data warehouse Vs data mart
    3. OID Vs URL
    4. Supervised Vs Unsupervised learning

Q2. (a) What is multidimensional data cube of hyper cube? How slice and dice technique fits into this model?     7

(b) Explain architecture of distributed DBMS.     8

Q3. (a) What is frequent itemsets? What is apriory property? Describe an algorithm for finding frequent itemsets.     7

(b) Explain asynchronous replication process in detail.     8

Q4. (a) List the characteristics of XML. Explain XML documents and databases.     7

(b) Explain agglomerative algorithm of clustering in detail with an example.     8

Q5. (a) What is data warehouse? Why is it needed? Explain ETL process in detail.     7

(b) Describe collection hierarchies. How do they differ from inheritance?     8

Q6. (a) What are 3 lock management schemes in DDBMS? Explain in detail with example.     7

(b) What is classification technique? Explain decision tree in detail.     8

Q7. (a) Compare MOLAP & ROLAP.     7

(b) Explain Atomic types, structured types and reference types in ORDBMS.     8

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(3 hours )                                         [Total Marks: 100]

Note: (1) Question No.1 is Compulsory.
      (2) Attempt any four out of the remaining questions.

Q1. a) What is role of project manager in an IT project? What is skill set required for good PM?  10
   b) What is outsourcing? List different reason for out outsourcing.  10

Q2. a) What are different organizational structure? Explain with suitable diagram.  10
   b) What is project implementation? Explain different approaches for the project
    implementation.  10

Q3. a) What are different type of contract? Explain in detail.  10
   b) What is project management framework? Explain with suitable diagram.  10

Q4. a) What is project communication plan? What are different things address in it.  10
   b) What are the processes involved in project procurement management?  10

Q5. a) Explain different phases in project life cycle with suitable diagram.  10
   b) Explain Project Risk Management & its planning process.  10

Q6. a) Explain schedule development tools: Gantt Chart, CPM, PERT, critical chain scheduling
    with suitable example.  10
   b) What are Conflicts? Explain different type of conflicts.  10

Q7. Write short note on (any four)  20
   a) Project Audit
   b) Stakeholder Management
   c) Project Scheduling
   d) Administrative Closure
   e) Tangibles Costs

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Time : 3hrs **Marks 100**

Note : 1. Question No. 1 is compulsory.
2. Attempt any four from remaining six.
3. All question carry equal 20 marks.

Q1 a) What is CRM technology Components? Explain CRM engine, Front-office solutions and Enterprise Application Integration. **10 Marks**

b) Explain the symbolic relationship between Customer Intelligence and Customer Relationship Management. **10 Marks**

Q2 a) You are appointed as the Chief Marketing Manager of one of largest corporate companies of India implementing EMA. Plan your: **10 Marks**
  i. Promotions activities,
  ii. Event Management and
  Iii. Loyalty & Retention Programs

b) As a student of M.C.A., which, according to you, is the biggest barrier to successful SFA? Justify your answer. (Sales Force Automation SFA ) **10 Marks**

Q3 a) Compare the traditional 'Response Management' and 'Closed loop' feedback of e-marketing **10 Marks**

b) Explain opportunity management. What is lead management. **10 Marks**

Q4 a) What do mean by call routing. How is it implemented and how does it help call centre. **10 Marks**
b) Explain the advantages and disadvantages of implementing Application Service Provider. **10 Marks**

Q5 a) What is "Beta testing"? What are the advantages from designer's point of view? **10 Marks**
b) In a "kick-off" meeting, what is the role of a Project Manager, Implementation leader and system Engineers of the vendor company and their counterparts in the client company. **10 Marks**

Q6 a) What is IVR? What is inbound IVR and outbound IVR? **10 Marks**
b) Explain how the traditional distribution channels structure support customer relationship. **10 Marks**

Q7 Write Short note on following **(any four)** **20 Marks**
a) CRM and e-CRM
b) Automatic Call distribution
c) Power User Beta Test
d) G-SPOT of CRM
e) Impact of CRM on marketing channel

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