[Time: Three Hours] **[Marks: 100]**

Please check whether you have got the right question paper.

N.B: 1. Question.No.1 is compulsory.
2. Attempt any four questions from remaining six questions.

Q.1 a. Explain Project life cycle. **10**
b. Explain performance reporting and different ways of it. **10**

Q.2 a. What are Conflicts? Explain different type of conflicts. **10**
b. Explain different practices of exemplary leadership. Also explain leadership style with suitable examples. **10**

Q.3 a. What is implementation? Describe the approaches to implementing information system. **10**
b. Explain common sources of risk of Information Technology Projects. **10**

Q.4 a. What is project? What are its main attributes? Explain triple constraint in details? **10**
b. What are the main processes in Communication Management? **10**

Q.5 a. Explain the importance of planning purchase and acquisition for project procurement management. **10**
b. What do you mean by system view of project? Explain in details with three sphere model for managing system. **10**

Q.6 a. What are different types of contract? Explain in detail. **10**
b. Explain schedule tools: Gantt charts, CPM, PERT. **10**

Q.7 Write short notes on following: (Any 4) **20**
a. Tangible costs
b. Administrative Closure
c. Risk Breakdown Structure
d. Project Audit
e. Stakeholder Management

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M.C.A. (SEM-IV)
JAVA PROGRAMMING
(MAY-2019)

Q.P. Code: 40314

(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) What is package? Write steps to Create package and explain Package Concept **[10]**
　　　　Using all the access modifiers with Suitable example.
　　(b) Describe Java Program Steps in order to get connectivity to database along **[10]**
　　　　with example.

Q.2 (a) Write a program to display JLable and JButton using JFrame in Swing. **[10]**
　　(b) What is Interface? Write java program to implement interface. **[10]**

Q.3 (a) Explain how Exceptions are handled by Using try ,catch, finally, throw and **[10]**
　　　　throws keyword with suitable Example.

　　(b) What are Inner Classes and Abstract Classes? Explain with Suitable java **[10]**
　　　　program & Example.

Q.4 (a) State the five Layouts in Layout Manager for java AWT. Show the Layouts **[10]**
　　　　displayed by each of these Layout.
　　(b) Write a program of JDBC to Insert a value in a Database. **[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, **[10]**
　　　　TextArea & List Using AWT package.
　　(b) What is Inner Classes and Abstract Classes? Explain with Suitable java **[10]**
　　　　program & Example.

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

M.C.A. (SEM-IV)
NETWORK SECURITY
(MAY-2019)

Q. P. Code: 37512

Time: 3hrs   Total Marks: 100

Note: 1. Question No. 1 is compulsory
2. Attempt any four out of remaining six questions
3. Illustrate answers with sketches wherever required.

Q1.	a.	What is cryptography? Compare Symmetric Key Cryptography and Asymmetric Key Cryptography.	**[10]**
	b.	Explain in detail PGP.	**[10]**
Q2.	a	Explain Diffie Hellman key exchange protocol with a suitable example. How can this mechanism be foiled by an attacker?	**[10]**
	b.	Explain different algorithm modes.	**[10]**
Q3.	a.	Define network security? What are the services and mechanisms provided by network security?	**[10]**
	b.	Give Comparison of MD5 and SHA-1.	**[10]**
Q4.	a.	What is Ticket Lifetime? Distinguish between Renewable Tickets and Postdated Tickets.	**[10]**
	b.	Explain mutual authentication and reflection attack with the help of diagram. Suggest two methods to fix it.	**[10]**
Q5.	a.	Explain SSL Architecture.	**[10]**
	b.	What are the various types of Malware? Explain in detail	**[10]**
Q6.	a.	Explain working of Kerberos. How is Kerberos V5 different from V4?	**[10]**
	b.	Explain the security mechanism used on the electronic transactions	**[10]**
Q7.		Write short notes on **any four**	**[20]**
	a.	Certificate Revocation.	
	b.	Digital Signature	
	c.	IPSec	
	d.	Biometrics	
	e.	El-Gamal signatures	

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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) Draw a class diagram for following information. Make use of qualified association. **10**
Explain any assumptions or design decisions that you make.
The UK banking system consists of a number of banks. Each bank has a number of branches, each identified by a unique sort code. Banks maintain accounts, each with a unique account number. In addition, each account is held at a particular branch of the bank. Some accounts allow cheques to be written, where each cheque is identified with a cheque number.

 (b) What criteria can one employ to partition classes **10**

2. (a) Explain following concepts as applied to the dynamic modeling: - **10**
 (i) Abstract class
 (ii) Multiple inheritance
 (iii) Protocol

 (b) Discuss how cohesion and coupling affect the flexibility of static modeling of a system. **10**

3. (a) Write short notes on (any two) **10**
 (i) A 'package' in UML
 (ii) Company diagram in UML
 (iii) Class normalization for cohesion

 (b) Differentiate between (any two) **10**
 (i) State & Event
 (ii) Value & Reference semantics
 (iii) SA/SD and JSD

4. (a) Draw a use case diagram for employee payroll system. List all the assumptions taken into consideration for the system scope. Write use case description. **10**

 (b) What is importance of modeling? Explain Booch methodology. **10**

5. (a) Explain collaboration diagrams with example. **10**

 (b) What criteria one can employ to partition classes **10**

6. (a) Explain state chart diagram with example of "life cycle of a thread in java" **10**

 (b) Explain the concept of time constraints and duration. **10**

7. (a) Discuss with example implementation architecture. **10**

 (b) Draw a component diagram for ATM system. **10**

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M.C.A. (SEM-IV)
ADVANCE DATABASE TECHNIQUES
(MAY-2019)

(3 Hours) [Total Marks: 100]

Note: 1) Question No. 1 is **compulsory**
 2) Attempt any **four** questions from the remaining **six** questions.

Q 1. Write short note on the following (attempt any **Four**) 20
 a. Parallel data base architectures
 b. K-means Clustering
 c. Search engines
 d. Neural networks
 e. ORDBMS

Q 2. a) What are multidimensional cubes? Explain how the Pivot and Slice-dice operations are performed. 10
 b) Describe Naïve bays classification in detail with suitable example. 10

Q 3. a) Discuss how the scanning, sorting and join operations can be parallelized using data partition technique 10
 b) Explain Bell-LaPedula Model. 10

Q 4. a) Discuss Deadlock detection in distributed database. Explain dead lock preventive techniques with example. 10
 b) Explain the Architecture of data warehouse and explain detail. 10

Q 5. a) Explain ETL process in data warehousing in detail with suitable examples. 10
 b) Describe KDD Process in detail with suitable examples. 10

Q 6. a) How recovery in a distributed DBMS is more complicated than in centralized system. Justify your answer. 10
 b) What is bloom join and semi join? Explain them in detail with example. 10

Q 7. Differentiate between the following: 20
 a. Synchronous vs Asynchronous replication
 b. Star schema vs Snow flake schema
 c. OODBMS vs ORDBMS
 d. OLAP vs OLTP

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M.C.A. (SEM-IV)
CUSTOMER RELATIONSHIP MANAGEMENT
(MAY-2019)

(3 Hours) [Total Marks: 100]

N.B. (1) Question No. 1 is compulsory

(2) Answer any four questions from Question No.2 to 7

(3) All questions carry equal marks.

Q.1 (A) What is E-CRM, explain in detail characteristics of E-CRM [10]

(B) Explain Campaign Planning & Management? [10]

Q.2 (A) Explain Data synchronization in detail. [10]

(B) Explain Architecture of PeopleSoft CRM? [10]

Q.3 (A) Explain SFA application and its Features? [10]

(B) What modules can be included in CRM? [10]

Q.4 Write Short notes on: [20]

(A) Role of an ASP

(B) Opt-in and Opt-out method of marketing

(C) Kick off meeting

(D) Power user beta testing

Q.5 (A) Explain in detail Different Types of CRM? [10]

(B) List out factors that can be an obstacle for CRM success to an organization? [10]

Q.6 (A) What are the advantages of using CRM on mobile devices? [10]

(B) Explain importance of training in effective implementation of CRM? [10]

Q.7 (A) Explain in detail Computer Telephony Integration (CTI)? [10]

(B) Explain in detail about Prototype and proposal generation. [10]

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