M.C.A [SEM – IV]
Java Programming
(DEC- 2017)

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

Please check whether you have got the right question paper.

N.B: 1. Question.No.1 is **compulsory**.
        2. Answer any **four** questions from Question Nos.2 to 7.

Q.1) a)	Explain the difference between	**(10)**
	i. Method Overloading and Method Overriding	
	ii. Application and Applet	
b)	Explain Event delegation Model in java.	**(10)**
Q.2) a)	What is Multithreading? Explain Thread Life Cycle in detail.	**(10)**
b)	Explain use of Static variables and methods in Java.	**(10)**
Q.3) a)	Explain the features of java Language.	**(10)**
b)	Write a java program to demonstrate use of final keyword.	**(10)**
Q.4) a)	Explain any Five swing components in Java with suitable program.	**(10)**
b)	What is Exception? Explain in detail Checked Exception and Unchecked Exception.	**(10)**
Q.5) a)	What is Package in Java? Explain Package with access modifier.	**(10)**
b)	Explain types of drivers in JDBC	**(10)**
Q.6) a)	What is Stream in Java? Explain Object Serialization and Deserialization with suitable example	**(10)**
b)	What is Constructor? Explain Parameterized constructor with example.	**(10)**
Q.7) a)	Explain wrapper classes in java with suitable program.	**(10)**
b)	Write short note on **any two:-**	**(10)**
	i. Super keyword	
	ii. Inner classes	
	iii. JDK	
	iv. JVM	

(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) Explain 3-tier logical architecture   **10**

2. **(A)** Explain functional view of UML architecture.   **10**
    (B) Differentiate between   **10**
        i.   Link v/s association
        ii.   <extend> v/s <include>

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 three approaches to identify classes.   **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)** What is UML? What are the different views of UML?   **10**
    (B) Differentiate between sequence diagram and collaboration diagram?   **10**

7. Explain **any four** of the following terms :   **20**
    (A) Events & states
    (B) Packages
    (C) Realization
    (D) Generalization
    (E) Actor class

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Q.P. Code :02181

[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 from remaining six questions.
3. Illustrate answers with sketches wherever required and use of pencil should be done for drawing sketches.

Q.1	a)	Explain in detail DES algorithm with reference to its overview and a DES round.	**10**
	b)	What is key distribution center? How does the key distribution work with multiple KDC domains?	**10**
Q.2	a)	Explain Diffie Hellman key exchange protocol with a suitable example. How can this Mechanism is foiled by an attacker?	**10**
	b)	Define network security? What are the services and mechanisms provided by network security?	**10**
Q.3	a)	Explain RSA with the help of numerical example.	**10**
	b)	Explain different modes of algorithm with diagram.	**10**
Q.4	a)	Explain Kerberos and its working.	**10**
	b)	What is a firewall? Explain different types of firewall.	**10**
Q.5	a)	Explain in detail Email Security.	**10**
	b)	Explain mutual authentication and reflection attack with the help of diagram. Suggest two methods to fix it.	**10**
Q.6	a)	What is hash algorithm? Discuss MD4 in detail.	**10**
	b)	What is a digital certificate? Explain stepwise certification generation process.	**10**

Q.7 Write short notes on any four **20**
   a) Smart cards
   b) Digital signature
   c) Certificate Revocation
   d) PGP
   e) IPSec

M.C.A [SEM – IV]
Advance Database Techniques
(DEC- 2017)

Q.P. Code :02873

[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 from remaining six questions.

Q.1 a)	Describe architecture of distributed database.	(10)
b)	Explain KDD process with role of data mining.	(10)

Q.2 a)	Describe life cycle approach in project management.	(10)
b)	Explain characteristics and functionality of search engine.	(10)

Q.3 a)	Explain the concept of distributed catalog management.	(10)
b)	Describe Slice- and –Dice and Rotation in OLAP with suitable example.	(10)

Q.4 a)	What is OLAP? Explain architecture of Relational OLAP.	(10)
b)	What is data mining? Explain association rule data mining.	(10)

Q.5 a)	Describe data mart in data warehousing.	(10)
b)	What is multidimensional modeling? Explain star schema with example.	(10)

Q.6 a)	Discuss database design issues in ORDBMS.	(10)
b)	What is supervised learning? Explain classification algorithm.	(10)

Q.7   Write a short note on (any 4):-   (20)

1.   Database security
2.   Parallel join
3.   Web based OLAP
4.   User-defined ADTs
5.   Neural network
6.   ETL process

M.C.A [SEM – IV]
Elective I : Customer Relationship Management
(DEC- 2017)

Q.P. Code :01525

Time: 3 Hrs

NOTE:
- I.   Question No. 1 is **Compulsory**.
- II.   Attempt any four out of remaining six
- III.   Elaborate each answer with the help of an **example**

1. (A) Define CRM and describe purpose of a CRM System in detail.   10
    (B) What is web enabled call center? What would be your strategy and goals as   10
         customer relationship manager?

2. (A) Who are the (Application Service Providers) ASP's? What are the roles and   10
         functions of ASP's?
    (B) What do you mean by IVR with reference to call center?   10

3. (A) What is an ASP? Explain advantages and disadvantages of ASP.   10
    (B) "Cost of retaining old customers is always less than generating new ones". Justify   10
         with proper example.

4. (A) Explain all the SFA functionalities in detail.   10
    (B) Explain how the traditional distribution channels structure support customer   10
         relationship.

5. (A) Define G-SPOT as Goals, strategies, plans, objectives and tactics.   10
    (B) Describe EMA and explain all its components in detail.   10

6. (A) What is E-CRM, explain in detail characteristics of E-CRM   10
    (B) Explain the relationship between customer intelligence and customer relationship   10
         management.

7.   Explain any four of the following terms :   20

    (A) Cross selling
    (B) Computer Telephony Integration (CTI)
    (C) Data synchronization in SFA
    (D) Roll out and system hand off in CRM
    (E) Kick off meeting

***** ALL THE BEST *****

[Time : 3 Hours]   **[Marks : 100**

Please check whether you have got the right question paper.

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

1. (a) Explain four frames of project organization. How they can help Project Managers   **10**
         to explain the organizational context.
    (b) What do you mean by Project metrics? Give one example of any one project metrics   **10**
         to measure cost and schedule.

2. (a) Explain the concept of Make or Buy Decision with the help of an example.   **10**

    (b) Explain common sources of risk of Information technology Projects.   **10**

3. (a) What is nature of change? How change management affects a system?   **10**

    (b) What are the main processes in Communication Management?   **10**

4. (a) What are Conflicts? Explain different type of conflicts.   **10**

    (b) Discuss in detail about procurement management.   **10**

5. (a) What are different types of contract? Explain in detail.   **10**

    (b) Explain Outsourcing in Project Management.   **10**

6. (a) Explain Project life cycle.   **10**

    (b) Explain different ways to close out a project with an example.   **10**

7.   Write short notes on following (**Any 4**) :   **20**
    (a) Ethics in Project
    (b) Matrix Organization
    (c) Critical chain scheduling
    (d) Earned Value Analysis
    (e) Stakeholder Management

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