COA 505.3   Reg.No. ……………………………

CREDIT BASED FIFTH SEMESTER B.C.A. DEGREE EXAMINATION
OCTOBER 2012
B.C.A
DISTRIBUTED COMPUTING (ELECTIVE)

Time: 3 Hrs   Max. Marks: 120

PART – A

1. **Answer any 15 questions from the following: 15x2=30**

   a.. What is critical section?

   b. Write a note on client-server computing model.

   c. What is time stamp of an event?

   d. Expand WFG and DBA.

   e. Define fragmentation transparency.

   f. What is "naming" in distributed system?

   g. Mention the two types of deadlocks in distributed system.

   h. What is query in distributed DBMS?

   i. What is authorization?

   j. List the requirements of Mutual Exclusion algorithm.

   k. Define fragmentation schema.

   l. Name any two drawbacks of Two-phase commit protocol.

   m. Define synchronous protocols.

   n.What is happened before relation?

   o.Define distributed database system.

   p. What is Data Independence?

   q.Define Servlet.

   r. What is horizontal fragmentation?

PART – B

Answer any TWO questions from each unit:

UNIT – I

2. a. Explain the design issues in distributed operating system.
    b. Explain parallelism in Distributed Query processing.   **(10+5)**

3. a. Explain Semi join operation with an example.
    b. What are the advantages of distributed system over traditional time-sharing system?

(8+7)

4. a. Explain Distributed Two-phase locking scheme for concurrency control in DDBMS.
    b. Write a note on Query processing in distributed system.
(8+7)

UNIT – II

5. a. Discuss the features of distributed versus centralized databases.
    b. Explain Lamport's Algorithm for distributed Mutual Exclusion.
(**10+5**)

6. a. Explain the reference architecture of a distributed database with a neat diagram.
    b. Explain the rules and objectives of data fragmentation.
(10+5)

7. a. Explain different types of fragmentation with examples.
    b . Explain how to measure the performance in mutual exclusion algorithm.
(10+5)

UNIT – III

8. a. Explain the deadlock handling strategies in distributed systems.

b. Describe Mensce-Muntze algorithm for hierarchical deadlock detection.

(10+5)

9. a. Explain the three types of control organizations for distributed deadlock detection.

b. Write a note on web architecture.

(10+5)

10. a. Explain in detail the various issues related to fault tolerance.

b. Explain Ho-Ramamurthy's Algorithm for Centralised deadlock detection.   **(8+7)**

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CREDIT BASED FIFTH SEMESTER B.C.A. DEGREE EXAMINATION
OCTOBER 2013
B.C.A
DISTRIBUTED COMPUTING

Time: 3 Hrs   Max. Marks: 120

PART – A

1. Answer any 15 questions from the following: 15x2=30

a. Define distributed DBMS?

b. Define fragmentation scheme.

c. Write the equation for system throughput.

d. What do you mean by majority locking strategy?

e. What is time stamp of an event?

f. What is 'naming' in distributed system?

g. Define response time.

h. Expand WFG and DBA.

i. Define critical section.

j. What do you mean by mutual exclusion?

k. Define fragmentation transparency.

l. What is authorization?

m. Which are the two favorable conditions for deadlock detection in distributed system?

n. What is data independence?

o. Define deadlock. What are the two types of deadlock in distributed system?

p. What do you mean by RPC?

q. What KMI?

r. Name any two drawbacks of two phase commit protocol.

PART – B

Answer any TWO full questions from each unit:

UNIT – I

2. a. Write a note on query processing in distributed system.
   b. Explain primary site locking approach.
   c. Write a note on distributed operating system.   (5+5+5)

3. a. Explain the design issues in distributed operating system.
   b. Explain semi join operation with an example.   (7+8)

4. a. What are the advantages of distributed system over traditional time-sharing
      system?
   b. With the help of an example explain time stamp based concurrency
      control.
                                                                       (7+8)

UNIT – II

5. a. Explain Lamport's logical clock implementation for clock synchronization.
   b. Discuss the features of distributed versus centralized databases.   (10+5)

6. a. Explain different types of fragmentation with examples.
   b. What are the requirements of mutual exclusion algorithm? Explain.   (10+5)

7. a. Explain system model of agreement among sites in distributed system.
   b. How to measure the performance of mutual exclusion algorithms?   (8+7)

UNIT – III

8. a. Describe Mensu-Muntze algorithm for hierarchical deadlock detection.
   b. Explain the issues in deadlock detection and resolution with respect to
      distributed system.   (5+10)

9. a. Explain HO – Ramamurthy's Algorithm for centralized deadlock detection.
   b. Write a note on voting algorithm.   (8+7)

10. a. Explain non blocking commit protocol algorithm.
    b. Write a note on issues of fault tolerance.   (8+7)

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CREDIT BASED FIFTH SEMESTER B.C.A. DEGREE EXAMINATION
OCTOBER 2014
B.C.A
DISTRIBUTED COMPUTING (ELECTIVE)

Time: 3 Hrs   Max. Marks: 120

PART – A

1. Answer any 15 questions from the following: 15x2=30

   a. What is distributed system?
   b. Define the terms data migration and computation migration.
   c. What is Full Reduction of Relations?
   d. Explain the terms query graph and cyclic query.
   e. Write the disadvantage of locking Schemes. What is the alternative for locking?
   f. Define casually created events and concurrent events.
   g. What are the limitations of Lamport's Logical Clock?
   h. Explain network transparency.
   i. What is Byzantine fault?
   j. Differentiate between Synchronous and Asynchronous Computations.
   k. Explain the system model of agreement protocol.
   l. Compare mutual exclusion in single computer vs Distributed systems.
   m. Define Agreement Protocol.
   n. Which are the two types of Deadlock? Explain.
   o. Define the term global atomicity.
   p. What do you mean by network failure?
   q. Define non-blocking commit protocol.
   r. Explain the term Atomic Action.

PART – B

Answer any TWO full questions from each unit:

UNIT – I

2. a. Explain the following issues of Distributed operating system in detail.
      i) Global knowledge   ii) Naming   iii) Scalability
   b. Explain semi join operation with respect to distributed database with the help of an example.   (9+6)

3. a. Explain any three locking scheme applied to Distributed locking.
   b. Explain the collective Kernel Structure of a distributed operating system.   (9+6)

4. a. Explain Distributed Query processing and parallelism in query processing.
   b. Which are the three categories of distributed systems? Explain.
                                                                     (9+6)

UNIT – II

5. a. Explain the reference architecture for distributed database with the help of a neat diagram.
   b. What are the two limitations of Distributed systems? Explain. (10+5)

6. a. Write a note on Data Fragmentation.
   b. Explain the different levels of distributed transparency. (9+6)

7. a. Explain the three steps involved in Lamport's Algorithm for mutual exclusion.
   b. What are the metrics used in measuring the performance of mutual exclusion algorithm? (9+6)

UNIT – III

8. a. Explain Voting Algorithm in detail.
   b. Which are the deadlock handling strategies used in Distributed Systems. **(9+6)**

9. a. Explain HO – Ramamurthy's Algorithm for centralized deadlock detection.
   b. What are the issues in deadlock detection and resolution? (10+5)

10. a. Write two phase commit protocol in detail. Show that this protocol results in all participants either committing or aborting even in case of site failures.
    b. Which are the three different types of failures? Explain. (9+6)

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CREDIT BASED FIFTH SEMESTER B.C.A. DEGREE EXAMINATION
OCTOBER 2014
B.C.A
DISTRIBUTED COMPUTING (ELECTIVE)

Time: 3 Hrs Max. Marks: 120
PART – A
1. Answer any 15 questions from the following: 15x2=30

   a. Define Distributed Computing.

   b. What do you mean by query in distributed DBMS?

   c. What is meant by happened before relation?

   d. Define fragmentation.

e. What is data independence?
f. What is Mutual Exclusion?
g. Define Global Schema.
h. What is data migration?
i. Define synchronous protocol.
j. Mention the equation of system throughout in mutual exclusion.
k. What is time stamp locking?
l. Define deadlock.
m. Write any 2 software components for building a distributed database.
n. What are the two types of deadlocks in distributed system?
o. Expand WFG and DBA.
p. What is authentication?
q. What is location transparency?
r. Define vertical fragmentation.

PART – B

Answer any TWO full questions from each unit:

UNIT – I

2. a. Write the advantages of distributed systems over traditional time sharing system.
b. Explain distributed two-phase locking.
c. Explain distributed computing models. (4+5+6)

3. a. Explain any four design issues in distributed operating systems.
b. Explain semi-join operation with an example. (8+7)

4. a. Define full reduction of relation. Explain tree query and cyclic query.
b. Explain parallelism in distributed query processing.
c. Differentiate between primary site locking and majority locking. (5+5+5)

UNIT – II

5. a. What are the features of distributed versus centralized databases?
b. Write a note on horizontal fragmentation. (10+5)

6. a. Explain the reference architecture of a distribute database with a neat diagram.
b. Explain mutual exclusion in single computer system versus Distributed Systems. (10+5)

7. a. State and explain the Lamport's algorithm for distributed mutual exclusion.
b. Explain the requirements of Mutual exclusion algorithm. (8+7)

UNIT – III

8. a. Explain the issues in distributed deadlock detection and resolution.
b. Explain any two server side technologies. (10+5)

9. a. Explain HO–Ramamurthy's Two-phase Algorithm for centralized

deadlock detection.

b. Explain the Two-phase commit protocol. **(8+7)**

10. a. Explain in detail the various issues related to fault tolerance.

b. Describe Mensce-Muntze algorithm for hierarchial deadlock detection. **(10+5)**

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COA 505.3   Reg. No. ....

CREDIT BASED FIFTH SEMESTER B.C.A. DEGREE EXAMINATION
OCTOBER 2016
B.C.A
DISTRIBUTED COMPUTING

Time: 3 Hrs.   Max. Marks: 120

PART – A

1. **Answer any FIFTEEN questions from the following:**   15×2=30
   a. What do you mean by data migration and computation migration?
   b. Name any two locking schema to implement concurrency control in Distributed system.
   c. Define fully reduced relation.
   d. Write any two advantages of distributed computing.
   e. Expand GWFG and WFG.
   f. What do you mean by a query in Distributed Database System?
   g. Define Happened before relation.
   h. What is meant by fragmentation transparency?
   i. What is the purpose of Lamport's logical clock?
   j. Name models of processor failures.
   k. Write the classification of agreement problems.
   l. What do you mean by synchronous computations?
   m. Name the metrics that are used to measure the performance of agreement protocols.
   n. Define deadlock. Name the two types of deadlocks in distributed system.
   o. What are drawbacks of two-phase commit protocols?
   p. List the control organization for Distributed deadlock detection.
   q. What are the drawbacks of completely centralized algorithm for deadlock detection?
   r. List the issues in deadlock detection and resolution.

PART – B

Answer any TWO full questions from each unit:

UNIT – I

2. a. Explain primary site locking scheme for concurrency control in DDBMS.
   b. Explain any five issues in distributed operating system.   (5+10)

3. a. Explain different distributed computing models.
   b. Explain time stamp based concurrency control in DDBMS.   (10+5)

4. a. Explain parallelism in distributed query processing.
   b. Explain the semijoin operation with an example.   (5+10)

UNIT – II

5. a. Explain different features of distributed databases versus centralized databases.
   b. Explain the system model of agreement among sites in distributed system. (10+5)

6. a. State and explain Lamport's algorithm for distributed mutual exclusion.
   b. Explain the reference architecture of distributed database with a neat diagram. (8+7)

7. a. Discuss the limitations of Lamport's logical clock.
   b. Explain any two types of data fragmentation with an example. (6+9)

UNIT – III

8. a. Explain the two phase commit protocol.
   b. Describe Mensce-Muntze algorithm for hierarchical deadlock detection. (9+6)

9. a. Explain the static voting protocol algorithm.
   b. Explain the strategies in handling deadlock in distributed system. (10+5)

10. a. Explain HO-Ramamurthy's Two-phase algorithm for centralized deadlock detection.
    b. Explain the issues in deadlock detection and resolution in distributed system. (8+7)

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CREDIT BASED FIFTH SEMESTER B.C.A. DEGREE EXAMINATION
OCTOBER 2016
B.C.A
E – COMMERCE

Time: 3 Hrs.   Max. Marks: 120

PART – A

1. **Answer any FIFTEEN questions from the following:**   15×2=30
   a. Differentiate B2B and B2C Ecommerce.
   b. Which are the two categories of B2B market place?
   c. List the functions of Ecommerce.
   d. State any two core issues in the implementation of B2B.
   e. What is a payment gateway?
   f. Expand EDI and EFT.
   g. List any two main activities of Ecommerce.
   h. What is encryption?
   i. Differentiate public Key and private Key encryption.
   j. What is digital signature?
   k. What is SCM?
   l. Mention any two goals of SCM.
   m. What is a firewall?
   n. What is electronic cash?
   o. Write two advantages of net banking.
   p. Which are the categories of smartcard?
   q. Which are the different payment types in e-commerce?
   r. What is phishing?

PART – B

Answer any TWO full questions from each unit:

UNIT – I

2. a. Explain the four functions of Ecommerce.
   b. Write a note on the players of Ecommerce.   (8+7)

3. a. Which are the advantages of Ecommerce? Explain.
   b. List and explain the broad goals of Ecommerce.   (8+7)

4. a. What is the scope of Ecommerce? Explain.
   b. Explain the prerequisites of Ecommerce.   (10+5)

UNIT – II

5. a. Explain the B2C Ecommerce with a neat sketch.
   b. Write a note on the implementation problems in B2B. (10+5)

6. a. Explain any four modern payment systems.
   b. Which are the different privacy issues in Ecommerce? Explain. (8+7)

7. a. Explain the DES Encryption with a neat diagram.
   b. What are the benefits of sellers in a B2B market place? (10+5)

UNIT – III

8. a. Explain the different categories of SCM.
   b. What is a micropayment system? Explain. (8+7)

9. a. Explain the following:
      i) POS terminals   ii) paperless bills
   b. Write a note on spoofing and sniffing. (10+5)

10. a. Explain the different strategies of SCM.
    b. Write a note on net banking. (10+5)

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