قائمة الاسئلة
الانظمة الموزعة و المتوازية –المستوى الرابع -تكنولوجيا المعلومات – الكل – كلية الحاسوب وتكنولوجيا المعلومات – درجة الامتحان (50)
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1) Distributed Systems appear to the users of the system as a multiple computer.
   1) - TRUE.
   2) + FALSE.

2) Networks focus on packets, routing and applications.
   1) - TRUE.
   2) + FALSE.

3) From the distributed system's challenge is resource sharing.
   1) - TRUE.
   2) + FALSE.

4) Which of the following is NOT a characteristic of distributed systems?
   1) - No global state.
   2) - No global clocks
   3) + Centralized control.
   4) - All sentences are TRUE.

5) Event ordering in distributed systems relies on the "happened before" relationship.
   1) + TRUE.
   2) - FALSE.

6) Thin clients execute applications locally.
   1) - TRUE.
   2) + FALSE.

7) Which of the following are considered communicating entities in distributed systems?
   1) + Nodes (sensors), Threads, Objects, Components, and Web services.
   2) - Nodes (sensors), Files, Objects, Components, and Web services.
   3) - Threads, Files, Objects, Functions, and Web services.
   4) - Nodes (sensors), Threads, Functions, Components, and Web services.

8) Middleware provides a higher development of distributed systems and, through layering, abstracts over
   1) + Heterogeneity components.
   2) - Homogenous components.
   3) - heterogeneity and homogenous components.
   4) - Consistency components.

9) One of the placement strategies used for collecting information and software maintenance?
   1) - Caching.
   2) - Mobile code.
   3) + Mobile agents.
   4) - Mapping.

10) All those are types of failures except one.
   1) - Omission Failure.
   2) - Arbitrary Failure.
   3) - Timing Failure.
   4) + System Failure.

11) What are the characteristics of IPC?
   1) - Unicast and Multicast.
   2) - Synchronous vs Asynchronous Communication.
   3) - Blocking, Deadlock, And Timeouts.
   4) + All sentences are TRUE.

12) Which of the following are working in the middleware layer?
   1)   -   Applications and services
   2)   +   Remote invocation, indirect communication, and IPC.
   3)   -   UDP and TCP
   4)   -   All sentences are FALSE.

13) External to internal representation is required if the two sides are of the same host type
   1)   -   TRUE.
   2)   +   FALSE.

14) The specification of a protocol should include
   1)   -   The sequence of data exchange
   2)   -   format of the data exchange.
   3)   -   Timeout
   4)   +   Both the sequence of data exchange and format of the data exchange

15) Which characteristic is TRUE. about unicast IPC?
   1)   -   One sender communicates with a group of receivers
   2)   +   A single sender communicates with a single receiver
   3)   -   All satatements are TRUE.
   4)   -   It only uses synchronous communication

16) What happens when a remote method invocation fails?
   1)   -   The client automatically retries indefinitely.
   2)   +   An exception is raised, informing the client of the failure.
   3)   -   The method is re-executed automatically without notifying the client.
   4)   -   The server shuts down the remote object.

17) Event-based programming can be used in distributed systems.
   1)   +   TRUE.
   2)   -   FALSE.

18) Distributed garbage collection uses _____ to track live references.
   1)   +   Reference counting.
   2)   -   Group communication.
   3)   -   IoT
   4)   -   All sentences are FALSE.

19) From the programming models of distributed communications?
   1)   -   Request-reply protocol.
   2)   -   Remote Procedure Calls.
   3)   -   Event-based Programming Model.
   4)   +   All sentences are TRUE.

20) Implement the object methods.
   1)   -   Remote object.
   2)   +   Remote interface.
   3)   -   Remote Reference Layer.
   4)   -   Application Layer.

21) One of these is not RMI Architecture.
   1)   +   Application Layer.
   2)   -   Stub/Skeleton Layer.
   3)   -   Remote Reference Layer.
   4)   -   Transport Layer.

22) From indirect communication paradigms
   1)   -   Group communication and Distributed shared memory(DSM).
   2)   -   Publish subscribe systems and Message queues.

3)   -   All statements are FALSE.

4)   +   All statements are TRUE.

23)   Sender and receivers know of each other in _____

1)   -   Remote invocation

2)   -   Interprocess communication.

3)   -   Indirect communication.

4)   +   All statements are FALSE.

24)   publish-subscribe systems delivery guarantees depend on _____

1)   -   The application requirements.

2)   -   The failure model.

3)   +   All statements are TRUE.

4)   -   Communication model

25)   In message queues, the sender and receiver know each other

1)   -   TRUE..

2)   +   FALSE..

26)   Multicast delivery is not coordinated with membership changes.

1)   +   TRUE..

2)   -   FALSE..

27)   Multicast is a strong case of a group membership service.

1)   -   TRUE..

2)   +   FALSE..

28)   Perfect networks have a fixed and exact propagation delay.

1)   +   TRUE.

2)   -   FALSE.

29)   Cristian's algorithm Only suitable for deterministic LAN

1)   +   TRUE.

2)   -   FALSE.

30)   What is a major limitation of Cristian's Algorithm?

1)   -   It requires a physical connection to the time server.

2)   +   It is only suitable for deterministic LAN environments with predictable delays.

3)   -   It cannot handle more than one client at a time.

4)   -   It requires the use of GPS for synchronization.

31)   If two events e and e′ have the same Lamport timestamp L(e)=L(e′) what can we say about them?

1)   -   e happened before e′ (e→e′).

2)   -   e′ happened before e (e′→e).

3)   +   The events are concurrent (e□e′).

4)   -   The events are the same.

32)   Real networks are:

1)   -   Asynchronous

2)   -   synchronous

3)   -   Unreliable and synchronous

4)   +   Asynchronous and Unreliable

33)   Which ACID property ensures that the effects of a transaction are permanently saved once completed successfully?

1)   -   Isolation

2)   -   Consistency

3)   -   Atomicity

4)   +   Durability

34)   What is the Inconsistent Retrieval Problem in Transactions?

1) + Incomplete results of one transaction are retrieved by another transaction.
2) - All transactions are completed successfully.
3) - All database values are saved correctly.
4) - No transactions can access shared resources.

35) In Strict Two-Phase Locking, when is unlocking performed?
1) - After every read/write operation.
2) - Before acquiring any locks.
3) + After the commit/abort operations.
4) - Immediately after acquiring locks.

36) Each transaction must be performed with interference from other transactions.
1) - TRUE.
2) + FALSE.

37) Each transaction is created and managed by a coordinator (on client side).
1) - TRUE.
2) + FALSE.

38) What should servers maintain to support recoverability from aborts?
1) - Permanent versions of data
2) - A detailed log of failed transactions
3) - Backup copies on external drives
4) + Tentative versions of objects in volatile memory

39) _____ is a set of technologies for copying and distributing data and database objects from one database to another
1) + Replication
2) - All statements are FALSE.
3) - logical database
4) - Transactions

40) Which of the following is a disadvantage of replication?
1) - Improved performance
2) - Move data closer to the user
3) - Easy maintenance
4) + All statements are FALSE.

41) File Replication is done to
1) - Increase complexity
2) - Increase cost
3) + Increase availability
4) - Increase data

42) Which of the following is TRUE. about the replication of data:
1) + Multiple copies at multiple computers of the same object/data
2) - Multiple copies of one computer of the same object/data
3) - Multiple copies at multiple computers of the various objects/data
4) - All statements are TRUE.

43) Clients access one logical item and receive a single result:
1) + Replication transparency
2) - Replication Consistency
3) - Fault-tolerant service
4) - Performance enhancement

44) A distributed database is which of the following?
1) + A single logical database that is spread to multiple locations and is interconnected by a network
2) - A loose collection of file that is spread to multiple locations and is interconnected by a network

3) - A single logical database that is limited to one location.

4) - A loose collection of file that is limited to one location.

45) What things are the transaction coordinator is responsible for?

1) - Starting the execution of the transaction

2) - Breaking transactions into a number of subtransactions

3) - Coordinating the termination of the transaction

4) + All statements are TRUE.

46) Is designed to allow any participant to choose to abort a transaction by voting:

1) - One-phase atomic commit protocol

2) + Two-phase atomic commit protocol

3) - TimeOut Protocol

4) - All statements are TRUE.

47) The TID of a subtransaction:

1) + An extension of its parent's TID

2) - The same TID of its parent's

3) - Subtransaction does not need TID

4) - Wholly different from the parents' TID

48) Information held by coordinators of nested transactions:

1) - Each coordinator has a list of its subtransactions

2) - At provisional commit, a subtransaction reports its status and the status of its descendents to its parent.

3) - If a subtransaction aborts, it tells its parent.

4) + All statements are TRUE.

49) A distributed transaction refers to:

1) - A flat transaction

2) - A nested transaction

3) + A flat or nested transaction

4) - All sentences are FALSE.

50) In a distributed transaction, the Coordinator interface provides a new method, which is used whenever a new participant joins the transaction, this method is:

1) + Join operation

2) - Open operation

3) - Close operation

4) - Abort operation