001. With a ---------- operating system, a user can remotely log in to another computer, using rlogin or telnet, and run processes there **A**

A network B disk
C centralized D distributed

002. An operating system that produces a single system image for all the resources in a distributed system is called a ---------- operating system **D**

A network B disk
C centralized D distributed

003. ----------are responsible for achieving concurrency transparency. **C**

A servers B clients
C Resource managers D kernels

004. In ---------architecture, each processor executes the same kernel and the kernels play largely equivalent roles in managing the hardware resources **A**

A symmetric processing B single multiprocessor
C multi multiprocessor D asymmetric processing

005. Both UNIX and Windows are examples of ----------operating systems **A**

A network B disk
C centralized D distributed

006. Kernels and ---------- processes are the components that manage resources and present clients with an interface to the resources **C**

A middleware B Client
C server D service

007. The ---------- facilitates the encapsulation and protection of resources inside servers; and it supports the invocation mechanisms required to access these resources, including communication and scheduling. **B**

A device driver B operating system
C server D IPC

008. ----------applications invoke operations on resources that are often on another node or at least in another Process **B**

A server B Client
C middleware D service

009. The task of any operating system is to provide problem-oriented abstractions of the underlying physical resources - the processors, memory, ---------- and storage media. **C**

A application program B hardware
C communications D middleware

010. ---------- is the unit of resource management: a collection of local kernel managed resources to which its threads have access. **A**

A execution environment B process environment
C thread environment D stack environment

011. A ----------region is one that is backed by the same physical memory as one or more regions belonging to other address spaces. **B**

A address memory B shared memory
C virtual memory D sequential memory

012. The UNIX ----------system call creates a process with an execution environment copied from the caller **C**

A call B run
C fork D exec

013. The UNIX ----------system call transforms the calling process into one executing the code of a named program. **D**

A call B run
C fork D exec

014. A kernel process executes with the processor in ----------(privileged) mode **C**
A admin B user
C supervisor D kernel

015. An address space is a collection of ranges of ---------- memory locations, in each of which a specified combination of memory access rights applies, such as read-only or read-write. **B**
A cache B virtual
C content addressable D secondary

016. The ---------- abstraction layer in Windows deals with dispatching of interrupts. system call traps and other exceptions, control of memory management unit and hard ware caches, processor and floating point unit register manipulations **B**
A software B Hardware
C middleware D client

017. ----------runs on a variety of OS-hardware combinations (platforms) at the nodes of a distributed system **D**
A application program B hardware
C communications D middleware

018. A ----------language is a language in which no module may access a target module unless it has a reference to it - it cannot make up a pointer to it. **A**
A type-safe B type cast
C type strong D typed

019. In ----------initiated load-sharing algorithms, a node whose load is below a given threshold advertises its existence to other nodes so that relatively loaded nodes will transfer work to it. **B**
A server B receiver
C sender D client

020. ---------- load-sharing systems, the overall load is distributed to its individual nodes in _____ transfer of processes **B**
A Pre - emptive B Non Pre - emptive
C sender - initiated D receiver - initiated

021. In ---------- architecture, the server creates a fixed pool of 'worker ' threads to process the requests when it starts up **B**
A thread per connection B worker pool
C thread per object D thread per request

022. In ---------- architecture, the I/O thread spawns a new worker thread for each request, and that worker destroys itself when it has processed the request against its designated remote object **D**
A thread per connection B worker pool
C thread per object D thread per request

023. ---------- managers collect information about the nodes and use it to allocate new processes to nodes **D**
A schedule B job
C process D Load

024. In ---------- initiated load-sharing algorithms, the node that requires a new process to be created is responsible for initiating the transfer decision. **C**
A server B receiver
C sender D client

025. The --------process allocation policy determines whether to situate a new process locally or remotely. **B**
A location B transfer

C register D execution

026. The ----------process allocation policy determines which node should host a new process selected for transfer. **A**

A location B transfer

C register D execution

027. A ----------is a set of off-the-shelf computers interconnected by a high-speed communication network such as a switched gigabit/ second Ethernet. **D**

A multiprocessor B workstation

C node D cluster

028. A software---------- is an event that causes a thread to be interrupted **C**

A call B signal

C interrupt D instruction

029. The overheads associated with thread switching are ----------and ---------- **B**

A priorities, creation B scheduling, context switching

C sharing, objects D cost, sharing

030. Switching to the kernel, or to another thread belonging to the same execution environment via the kernel, involves a ---------- **A**

A domain transition B context switching

C resource sharing D power saving

031. Memory management units usually include a hardware cache to speed the translation between virtual and physical addresses, called a ---------- **D**

A alias table B symbol table

C page table D TLB

032. The ---------- architecture associates a thread with each remote object. **C**

A thread per connection B worker pool

C thread per object D thread per request

033. In ----------architecture, the server creates a new worker thread when a client makes a connection and destroys the thread when the client closes the connection **A**

A thread per connection B worker pool

C thread per object D thread per request

034. The disadvantage of ---------- architecture is the overhead of the thread creation and destruction operations. **D**

A thread per connection B worker pool

C thread per object D thread per request

035. The ---------- architecture associates a thread with each connection. **A**

A thread per connection B worker pool

C thread per object D thread per request

036. ---------- typically block the caller, even when there is strictly no need to wait **B**

A interrupt B Remote method invocations

C function call D thread

037. In Java, ---------- blocks the calling thread for up to the specified time until thread has terminated. **B**

A thread.interrupt() B thread.join()

C object.wait() D object.notify()

038. In Java, ---------- blocks the calling thread until a call made to notifyAll() **C**

A thread.interrupt() B thread.join()

C object.wait() D object.notify()

039. There is no way for an applet or servlet thread to override the group priorities set by the manager threads, since they cannot be overridden by calls to ---------- **A**

A setPriority() B getPriority()
C sendPriority() D gainPriority()

040. Java provides the ---------- keyword for programmers to designate the well known monitor construct for thread coordination **C**
A IPC B static
C synchronized D monitor

041. A thread ends its life when it returns from the ---------- method , or when its destroy() method is called. **A**
A run() B start()
C yield() D sleep()

042. In Java, ---------- causes it to return from a blocking method call such as sleep(M). **A**
A thread.interrupt() B thread.join()
C object.wait() D object.notify()

043. In Java, ------- changes the state of the thread from SUSPENDED to RUNNABLE **B**
A run() B start()
C yield() D sleep()

044. In Java, ---------- cause the thread to enter the SUSPENDED slate for the specified time **A**
A sleep() B start()
C yield() D run()

045. In Java, ---------- enter the READY Slate and invoke the scheduler **B**
A sleep() B yield()
C start() D run()

046. A ----------is a call from the kernel to a process. which notifies the process 's scheduler of an event. **D**
A kernel activation B kernel notify
C scheduler notify D scheduler activation

047. A ---------- scheduler assigns each user-level thread to a kernel- level thread . **A**
A user level B kernel level
C thread level D process level

048. The user-level scheduler has the task of assigning its ----------threads to the set of SAs currently executing within it **D**
A HALTED B BLOCKED
C RUNNABLE D READY

049. Race conditions are conveniently avoided in ---------- scheduling **C**
A routine B preemptive
C non- preemptive D priority

050. In ----------scheduling, a thread may be suspended at any point to make way for another thread, even when the preempted thread would otherwise continue running. **B**
A routine B preemptive
C non- preemptive D priority

051. In ---------- scheduling, a thread runs until it makes a call to the threading system when the system may de-schedule it and schedule another thread to run. **C**
A routine B preemptive
C non- preemptive D priority

052. A thread that needs to block awaiting a certain condition calls an object 's ---------- method. **B**
A notify() B wait()
C join() D interrupt()

053. When the I/O thread subsequently adds a request to the queue, it calls the queue 's ---------- **A**

method to wake up the worker

A notify() B wait()
C join() D interrupt()

054. The ---------- method is useful for prematurely waking a waiting thread. **A**

A interrupt() B wait()
C join() D notify()

055. Which module in the file system modules reads or writes file data or attributes? **D**

A file B directory
C access control D file access

056. Which module in the file system modules checks permissions for operation required? **C**

A file B directory
C access control D file access

057. Which module in the file system modules accesses and allocates disk blocks? **D**

A file B directory
C access control D block

058. Which module in the file system modules performs disk I/O and buffering? **A**

A device B directory
C access control D file access

059. Which module in the file system modules relates file names to file IDs? **B**

A file B directory
C access control D file access

060. Which module in the file system modules relates file IDs to particular files? **A**

A file B directory
C access control D file access

061. A ----------file system enables programs to store and access remote files exactly as they do local ones, allowing users to access files from any computer on a network. **A**

A distributed B centralized
C network D simple

062. ----------provide a restricted form of data sharing in which file s stored locally to the server arc available to clients throughout the Internet, but the data accessed through web servers is managed and updated in file systems at the server or distributed on a local network. **B**

A Internet server B Web servers
C web browser D web crawler

063. A---------- enables programs to store and access remote files exactly as they do local ones, allowing users to access their files from any computer in an intranet. **C**

A Internet server B Web servers
C file server D storage server

064. Files or groups of files may be re located without changing their pathnames, and user programs see the same name space wherever they are executed. This property is known as ---------- **A**

A location transparency B performance transparency
C access transparency D mobility transparency

065. Client programs should continue to perform satisfactorily while the load on the service varies within a specified range This property is known as ---------- **B**

A location transparency B performance transparency
C access transparency D mobility transparency

066. The service can be expanded by incremental growth to deal with a wide range of loads and network sizes. This property is known as ---------- **C**

A location transparency B performance transparency
C scaling transparency D mobility transparency

067. Changes to a file by one client should not interfere with the operation of other clients simultaneously accessing or changing the same file. This is the well -known issue of ---------- **D**

A consistency B update
C dead lock D concurrency control

068. Neither client programs nor system administration tables in client nodes need to be changed when files are moved. This property is known as ---------- **D**

A location transparency B performance transparency
C access transparency D mobility transparency

069. Client programs should be unaware of the distribution of files. This property is known as --------- **C**

A location transparency B performance transparency
C access transparency D mobility transparency

070. The Web uses ---------- extensively both at client computers and at proxy servers maintained by user organizations **C**

A paging B scheduling
C caching D segmenting

071. ----------are responsible for the organization, storage, retrieval, naming, sharing and protection of files. **C**

A network systems B directories
C File systems D meta data

072. A ---------- is a file often of a special type. that provides a mapping from text names to internal file identifiers **B**

A file structure B directory
C meta data D dictionary

073. Which is not a major component of a file system? **C**

A Directory service B Authorization service
C Shadow service D System service

074. An architecture in which no special machines manage network resources is known as ---------- **D**

A Space based B Tightly coupled
C Loosely coupled D Peer-to-Peer

075. Which is not an example of state information? **B**

A Mounting information B Description of HDD space
C Session keys D Lock status

076. The ----------service is concerned with implementing operations on the contents of files. **A**

A flat file B directory
C meta file D client module

077. What are not the characteristics of a DFS? **C**

A login transparency and access transparency B Files need not contain information about their physical location
C No Multiplicity of users D No Multiplicity if files

078. An architecture that offers a clear separation of the main concerns in providing access to files is obtained by structuring the file service as ---------- components **D**

A five B four
C two D three

079. In ----------file systems, there is a need to authenticate client requests so that access control at the server is based on correct user identities and to protect the contents of request and reply messages with digital signatures and encryption of secret data. **D**

A encrypted B centralized

C networked D distributed

080. What are characteristics of distributed file system? **A**

A Its users, servers and storage devices are dispersed B Service activity is not carried out across the network

C They have single centralized data repository D There are multiple dependent storage devices

081. What are the different ways in which clients and servers are dispersed across machines? **B**

A Servers may not run on dedicated machines B Servers and clients can be on same machines

C Distribution cannot be interposed between a OS and the file system D OS cannot be distributed with the file system a part of that distribution

082. Napster initially became very popular for ---------- exchange **C**

A image B data

C music D information

083. Napster maintained a ---------of available files for enabling clients to access data resources quickly and dependably wherever they are located throughout the network. **A**

A unified index B directory

C listing D dictionary

084. In a peer-to-peer architecture, peers can serve as---------- **D**

A Clients B Servers

C Middle-system D clients and servers

085. The -------- service provides a mapping between text names for files and their UFIDs. **B**

A flat file B directory

C meta file D client module

086. The division of responsibilities between the file service and the directory service is based upon the use of ---------- **C**

A directories B files

C UFIDs D metadata

087. Create creates a new, empty file and returns the ---------- that is generated. **C**

A fileId B file pointer

C UFID D UID

088. Peer-to-peer (P2P) networks are formed for **B**

A Manual file sharing B Distributed file sharing

C Connected file sharing D Cloud file sharing

089. Peer machines are built over **C**

A 1 Server machine B 1 Client machine

C Many Client machines D Many Server machines

090. In a distributed file system, when a files physical storage location changes _____ **B**

A file name need to be changed B file name need not to be changed

C files host name need to be changed D files local name need to be changed

091. The ----------algorithm cannot tolerate a crash failure of any single process **A**

A ring-based B Maekawa 's

C central server D Ricart

092. ---------- algorithm can tolerate some process crash failures: if a crashed process is not in a voting set that is required. then its failure will not affect the other processes **B**

A ring-based B Maekawa 's

C central server D Ricart

093. The ----------algorithm can tolerate the crash failure of a client process that neither holds nor has requested the token **C**

A ring-based B Maekawa 's
C central server D Ricart

094. To perform effectively peer to peer, middle ware must also address the following non-functionalRequirements. **A**

A Load balancing B cloud computing
C Replication scheme D interaction between servers

095. Peer-to-Peer leads to the development of technologies like---------- **D**

A Naming grids B Data grids
C Computational grids D Naming grids and Data grids

096. An unreliable failure detector may produce one of -------- values when given the identity of a process **C**

A four B three
C two D six

097. With the DOLR model locations for the replicas of data objects are decided outside the routing layer and the host address of each replica is notified to the DOLR using the ---------- operation. **B**

A put() B publish()
C post() D print()

098. A---------- is a service that processes queries about whether a particular process has failed. **C**

A failure recognizer B failure analyzer
C failure detector D failure classifier

099. According to the ring algorithm, links between processes are _____ **B**

A bidirectional B unidirectional
C both bidirectional and unidirectional D no direction

100. Initially, every process is marked as a ---------- in an election **C**

A coordinator B participant
C non- participant D leader

101. What are the characteristics of tightly coupled system?i) Different clock ii) Use communication links iii) Same clock iv) Distributed systems **D**

A i B i and iv
C i, ii and iii D ii, iii and iv

102. Which of the following disadvantages follows the single coordinator approach? **A**

A Bottleneck B Slow response
C Deadlock D One request per second

103. In election algorithm, On forwarding an election message in any case, the process marks itself as a ----------. **B**

A coordinator B participant
C non- participant D leader

104. What are the characteristics of tightly coupled system?i) Same clock, usually shared memory ii) Communication is via this shared memory iii) Multiprocessors iv) Different clock **B**

A i B i, ii and ii
C ii and iii D i, iii and iv

105. The performance of an election algorithm can be measured by its total network bandwidth utilization and ---------- for the algorithm **C**

A throughput B submission time
C turnaround time D waiting time

106. What are the characteristics of fully distributed approach?i) When responses are received from all processes, then process can enter its Critical Section ii) When process exits its critical section, **B**

the process sends reply messages to all its deferred requests. iii) It requires request,reply and release per critical section entry iv) One processor as coordinator which handles all requests

A i
B i and ii
C ii and iii
D iii and iv

107. An algorithm for choosing a unique process to play a particular role is called a/an ---------- algorithm **C**

A choose
B selection
C election
D point

108. Which of the following is a Election Algorithm? **A**

A Ring algorithm
B Centralized algorithm
C Distributed algorithm
D bankers algorithm

109. Implementation of a stateless file server must not follow ---------- **B**

A Idempotency requirement
B Encryption of keys
C File locking mechanism
D Cache consistency

110. What are the advantages of file replication? **A**

A Improves availability & performance
B Decreases performance
C They are consistent
D Improves speed

111. A synchronous system has a known bound on the message delivery time and the clock drift and hence can implement a ----------failure detector **C**

A unsuspected
B suspected
C reliable
D unreliable

112. What are the characteristics of the stateless server? **A**

A Easier to implement
B They are not fault-tolerant upon client or server failures
C They store all information file server
D They are redundant to keep data safe

113. _____ of the distributed file system are dispersed among various machines of distributed system. **D**

A Clients
B Servers
C Storage devices
D Storage devices, Servers and Clients

114. ---------- is the indefinite postponement of the request to enter the critical section from a given process **C**

A liveness
B deadlock
C starvation
D fairness

115. The ---------- operation in the basic directory service performs a single Name to UFID translation **C**

A unname
B addname
C lookup
D trans

116. In a distributed file system, _____ is mapping between logical and physical objects. **B**

A client interfacing
B naming
C migration
D heterogeneity

117. _____ is not possible in distributed file system. **B**

A File replication
B Migration
C Client interface
D Remote access

118. If a process, whether it is correct or fails, delivers message m, then all correct processes in group(m) will eventually deliver m. This property is called ---------- **B**

A correct agreement
B uniform agreement
C persistent agreement
D correct agreement

119. ---------- agreement allows a process to crash after it has delivered a message, while still ensuring that all correct processes will de liver the message **B**

A correct B uniform
C persistent D correct

120. ---------- agreement is useful in applications where a process may take an action that produces an observable inconsistency before it crashes **B**

A correct B uniform
C persistent D correct

121. If a correct process delivers message m before it delivers m ', then any other correct process that delivers m will deliver m before m. This ordering is ---------- **C**

A partial B casual
C Total D FIFO

122. The essential feature of multicast communication is that a process issues ---------- multicast operation/operations to send a message to each of a group of processes instead of issuing multiple send operations to individual processes. **D**

A many B zero
C two D one

123. A group is said to be ----------if only members of the group may multicast to it **C**

A close B open
C closed D single

124. Which is not a major component of a file system? **C**

A Directory service B Authorization service
C Shadow service D System service

125. What are the characteristics of a distributed file system? **A**

A Its users, servers and storage devices are dispersed B Service activity is not carried out across the network
C They have single centralized data repository D There are multiple dependent storage devices

126. Unlike the ring-based algorithm, ------- algorithm assumes that the system is synchronous: it uses timeouts to detect a process failure. **C**

A belady B priori
C bully D star

127. In distributed systems, election algorithms assumes that **A**

A a unique priority number is associated with each active process in system B there is no priority number associated with any process
C priority of the processes is not required D process will have low priority

128. ----------is a key to the effectiveness of distributed systems in that it can provide enhanced performance, high availability and fault tolerance. **D**

A correctness B maintenance
C consistency D Replication

129. With deadlock ---------schemes, a transaction is aborted only when it is involved in a deadlock **C**

A analysis B prevention
C detection D coverage

130. The ---------- graph is a directed graph in which nodes represent transactions and objects, and edges represent either an object held by a transaction or a transaction waiting for an object. **D**

A wait-xor B wait-or
C wait-and D wait-for

131. What are the important steps followed when recovery from failure happens? **A**

A Post repairing integration with main system should happen smoothly and gracefully B Upon link failure both parties at end must not be notified

C Fault recovery system must me adjusted D Failures are logged systematically

132. In case of failure, a new transaction coordinator can be elected by **C**

A bully algorithm B ring algorithm

C both bully and ring algorithm D FCFS

133. A message will remain in the hold-back queue indefinitely until it can be ---------- according to the corresponding sequence number. **A**

A TO-delivered B T-delivered

C B-delivered D T-multicast

134. For proper synchronization in distributed systems **C**

A prevention from the deadlock is must B prevention from the starvation is must

C prevention from the deadlock & starvation is must D prevention from the process execution is must

135. In distributed systems, transaction coordinator **D**

A starts the execution of transaction B breaks the transaction into number of sub transactions

C coordinates the termination of the transaction D starts the execution of transaction , breaks the transaction into number of sub transactions and coordinates the termination of the transaction

136. Expand MVGV. **C**

A Multi Version Generalized Value B Multi Version General Validation

C Multi Version Generalized Validation D Multi Variable Generalized Validation

137. ----------is a form of parallel validation that ensures that transaction numbers reflect serial order, but it requires that the visibility of some transactions be delayed after having committed **B**

A MVGY B MVGV

C MYGV D MVCV

138. If a correct replica manager handles r before request r ' then any correct replica manager that handles r ' handles r before it. This ordering is ---------- **C**

A partial B casual

C Total D FIFO

139. The ----------validation checks that the combination of the orderings at the individual servers is serializable; that is, that the transaction being validated is not involved in a cycle. **B**

A local B global

C ordering D transaction

140. A distributed approach to dead lock detection uses a technique called ----------, in which the global wait -for graph is not constructed, but each of the servers involved has knowledge about some of its edges **B**

A edge detection B edge chasing

C path detection D path building

141. Most deadlock detection schemes operate by finding cycles in the transaction ----------graph **A**

A wait-for B wait-or

C wait-and D wait-xor

142. Detection of a distributed deadlock requires a ----------to be found in the globaltransaction wait - for graph that is distributed among the servers that were involved in the transactions. **B**

A component B cycle

C self loop D deadlock

143. Centralized deadlock detection suffers from the usual problems associated with centralized solutions in distributed systems ----------, lack of fault tolerance and no ability to scale **A**

A poor availability B cost

C connection overhead D frequency

144. A deadlock that is detected but is not really a deadlock is called a ---------deadlock. **C**

A zombie B partial
C phantom D orphan

145. If the issue of request r happened-before the issue of request r ', then any correct replica manager that handles r ' handles r before it. This ordering is ---------- **B**

A partial B casual
C Total D FIFO

146. In a two-phase locking protocol, a transaction release locks in _____ phase. **A**

A shrinking phase B growing phase
C running phase D initial phase

147. A mechanism which ensures that simultaneous execution of more than one transaction does not lead to any database inconsistencies is called _____ mechanism. **D**

A transaction control B transaction management
C concurrency parallelism D concurrency control

148. Replication should be used when which of the following exist? **C**

A When transmission speeds and capacity in a network prohibit frequent refreshing of large tables. B When using many nodes with different operating systems and DBMSs and database designs.
C The application 's data can be somewhat out-of-date D The required data are at one local site and the distributed DBMS passes the request to only the local DBMS

149. In _____, one or more users/programs attempt to access the same data at the same time. **A**

A concurrency B transaction control
C locking D two-phase locking

150. With ----------concurrency control , each transaction is validated before it is allowed to commit. **B**

A time stamp B optimistic
C pessimistic D timeout

151. If a front end issues request r then request r ', then any correct replica manager that handles r ' handles r before it. This ordering is ---------- **D**

A partial B casual
C Total D FIFO

152. ----------is only one possible function that the processes could use to agree upon a value from the candidate values **A**

A majority B integrity
C termination D agreement

153. When ----------ordering is used for concurrency control , conflicts are resolved as each operation is performed **B**

A optimistic B time stamp
C pessimistic D timeout

154. After the nodes are prepared, the distributed transaction is said to be _____ **A**

A in-doubt B in-prepared
C prepared transaction D in-node

155. If a database server is referenced in a distributed transaction, the value of its commit point strength determines which role it plays in the _____ **A**

A two-phase commit B two-phase locking
C transaction locking D checkpoints

156. The activity of ensuring atomicity in the presence of Transaction aborts is called ---- **C**

A transaction control B transaction management
C transaction recovery D concurrency control

157. _____helps solve concurrency problem. **A**

A locking B transaction monitor
C transaction serializability D two-phase commit

158. The role of the ---------is to communicate by message passing with one or more of the replica managers, rather than forcing the client to do this itself explicitly. **D**

A function B interface
C backend D front end

159. In a ---------- system. replica managers do not crash but they may cease operating for an indefinite period **C**

A auto B dynamic
C static D extern

160. In a distributed transaction, the locks on an object are held locally .i.e. in the --------- **B**

A same system B same server
C page table D log

161. ---------- component of a database is responsible for ensuring atomicity and durability. **A**

A recovery management B concurrency control
C storage management D query evaluation engine

162. An ----------is a collection of objects that process the same set of invocations concurrently and each returns responses **B**

A class B object group
C object set D object count

163. The ----------are physical objects, each stored at a single computer with data and behaviour that are tied to some degree of consistency by the system 's operation **B**

A entities B replicas
C classes D attributes

164. The activity of providing Durability of the transaction is called .. **D**

A database control B transaction management
C transaction recovery D database recovery

165. _____is a specific concurrency problem wherein two transactions depend on each other for something. **C**

A phantom read problem B transaction read a problem
C deadlock D locking

166. A ----------service, by contrast always guarantees strictly correct behavior despite a certain number and type of faults **B**

A perfect B fault-tolerant
C high available D correct

167. The node where the distributed transaction originates is called the . **C**

A local coordinator B starting coordinator
C global coordinator D originating node

168. What is the maximum number of processes that may enter simultaneously inside the critical section to avoid race condition ? **A**

A One B Two
C Three D Four

169. In a --------system, replica managers may crash, and they are then deemed to have left the system **B**

A auto B dynamic
C static D extern

170. The global coordinator forgets about the transaction phase is called **C**

A Prepare phase B Commit phase
C Forget phase D Global phase

171. In two-phase commit, _____ coordinates the synchronization of the commit or rollback operations. **B**

A database manager B central coordinator
C participants D concurrency control manager

172. _____ is a scheme to resolve a deadlock. **B**

A timing in B timing out
C time delays D no time

173. Intentions list is used at the time of _____. **C**

A Transaction recovery B Transaction abortion only
C Committing or abortion of transaction D transaction commit only

174. _____ algorithm is used for detecting deadlocks. **A**

A path Chasing B Vector set
C Vertex set D vertex chase

175. _____ are used to identify deadlocks in a distributed system. **A**

A wait-for-graphs B linear graphs
C undirected graphs D null graphs

176. Storing a separate copy of the database at multiple locations is which of the following? **B**

A Vertical Partitioning B Data Replication
C Horizontal Partitioning D Horizontal and Vertical Partitioning

177. The situation in which a transaction holds a data item and waits for the release of data item held by some other transaction, which in turn waits for another transaction, is called _____ **D**

A serializable schedule B process waiting
C concurrency D deadlock

178. Which are the two complementary deadlock-prevention schemes using time stamps ? **A**

A The wait-die & wound-wait scheme B The wait-n-watch scheme
C The wound-wait scheme D The wait-wound & wound-wait scheme

179. Which of the following is a disadvantage of replication? **D**

A If the database fails at one site, a copy can be located at another site. B Each transaction may proceed without coordination across the network.
C Reduced network traffic D Each site must have the same storage capacity.