Model Question Paper

Subject Code: MT0048

Subject Name: Client server computing

Credits: 4   **Marks: 140**

Part A (One mark questions)

1. "A single machine can be both a client and a server depending on the _____-"

a. System software

b.Software requirement.

c.software configuration

d.Software specification

2. _____refers to computing technologies in which the hardware and software components are distributed across a network.

a. Client and Server

b. User and system

c. user and file server

d. user and database server

3. Which of the following is not the correct Client/Server software architectures.

a. Mainframe architecture

b. File sharing architecture

c.system architecture

d.Distributed/collaborative enterprise architecture

4. RPC stands for_____

a.Remote process call

b. Remote Procedure Call

c.Remote process client

d.Remote procedure client

5. "With which approach most of the application's

business logic is moved from the PC and into a common, shared host server."

a.multithreaded application

b.application server

c.middle application server

d.None of the above

6. "_____ tier it's much easier to design the

application to be DBMS- agnostic."

a.middle application server

b.multithreaded application

c.application server

d.Client server application

7. "In _____ implementation of client/server computing if we needed fault tolerant computing, we could

implement copies of objects onto multiple servers."

a.Data mining application

b. decision support application

c.distributed object

d.Centralized object

8. Which of the following is not the Complementary technologies to three tier architectures

a.Object-Oriented Design

b. three tier client/server architecture tools

c.Database Two Phase Commit processing.

d.Database Two Phase roll back processing.

9. As in a stand-alone system, the ability to retrieve information associated with a object is a primary function of the distributed system is called_____

a.Indeterminacy

b.Naming

c.Manageability

d.Security

10. _____can be manifested by inconsistency of multiple copies of data, by asynchrony , by latency and by event-ordering"

a.Manageability

b.Naming

c.Indeterminacy

d.Security

11. Which of the following is not the correct benefit of distributed computing.

a.Resource sharing

b.Performance

c.Availability

d.Security

12. Logically, the difference between a distributed computing environment and an environment which is not distributed is that _____."

"a. Not related code can be executing on more than one system in the network"

"b. Related code can be executing on more than one system in the network"

"c. Related code can be executing on one system"

"d. Not related code can be executing on one system"

13. In the distributed environment, the standard data-exchange mechanism is the_____

a.Data

b.Single system

c.network

d.Sharing

14. "_____ systems achieve concurrency by swapping out processes that are waiting for another event to complete and swapping in another process

that can execute."

a.Multi programming processor

b.Multitasking uni-processor

c.Multitasking multiprocessor

d.Multi programming multiprocessor

 15. OSF stands for_____

a.Open Source Foundation

b.Open Source Function

c.Open Software Foundation

d.Open Software Function

16. _____ technology provides the ability to access and store data at remote locations.

a.Centralized file system

b.Disk file system

c. Flash file system

d.Distributed file system

17. RPC systems encode arguments and return values using an _____

a. Extensible Markup Language

b.eXtensible HyperText Markup Language

c.External Data Representation

d.External disk drive

18. JDK stands for_____

a.Java Development Kit

b.Java demonstration kit

c.Java design kit

d.Java dynamic kit

19. Java RMI technology allows a Java object running in one _____ to make method calls to other Java objects in JVMs.

a.JDK

b.Computing system

c.JVM

d.JRMP

20. Which of the following is not the features of Java RMI technology in JDK 1.2 software:

1. custom sockets,

2. secure sockets,

3. Java VM activation, and

4. enhanced garbage collection. "

a.only 1 and 2

b. only 2,3 and 4

c.only 1,2 and 4

d.All are java RMI features

21. Which of the following is not the advantage of RMI

1. Object Oriented

2. Mobile Behavior

3. Read Once, Run Anywhere

4. Grid Computing

a.1 and 2

b.3 and 4

c.2 and 3

d. 1 and 4

22. JVM stands for_____

a. Java virtual machine

b. Java virtual method

c.Java virtual methodology

d.Java visable methods

23. In the Java platform's distributed object model, a _____ is one whose methods can be invoked from another Java virtual machine, potentially on a different host.

a.remote object

b.remote server

c.unicast remote object

d.unicast remote server

24. The _____class is the superclass of exceptions thrown by the RMI runtime during a remote method invocation.

a. java.RemoteException

b. java.rmi.object.RemoteException

c.java.rmi.object.objectException

d.java.rmi.RemoteException

25. DCOM stands for_____

a.Data Component Object Model

b. Data code object model

c.Distributed Component Object Model

d. Distributed code object model

26. A reference implementation of COM and DCOM in source-code form will be available for licensing through The Open Group in _____.

a.1997

b.1996

c.1998

d.1998

27. GUID stands for_____

a.Global user identifiers

b.Global user interface

c.globally unique identifiers

d.Global unique identifiers

28. Which COM library returns an interface pointer to a "class factory object" that can be used to create one or more uninitialized instances of the object class <CLSID>.

a.CoGetInstanceFromStorage

b.CoGetClassObject (<CLSID>…)

c.CoGetInstanceFromFile

d.CoCreateInstance(Ex)

29. Which COM library creates a new instance and initializes it from a file.

a.CoGetInstanceFromStorage

b.CoGetInstanceFromFile

c.CoGetClassObject (<CLSID>…)

d.CoCreateInstance(Ex)

30. The _____ concept was introduced as part of the security support in COM and it essentially represents a process that is shared by multiple CLSIDs.

a.AppID

b.GuiD

c.ServerID

d.ClientID

31. URL monikers on the Windows platforms use the _____-.

a.WinINet APIs

b.IPersistMoniker

c.IClassActivator

d.IPersistFile

32. When a client calls activation APIs like _____, COM typically creates an object and obtains an interface pointer representing this object

a.WinINet APIs

b.CoGetInstanceFromFile

c.CoGetInstanceFromStorage

d.CoCreateInstance

33. CORBA stands for_____

a.Content object request break architecture

b.Client-side object request break architecture

c.Common Object Request Broker Architecture

d.Component Object Request Broker Architecture

34. The ORB is a runtime component that can be used for distributed computing using _____ communication.

a.IIOP

b. TCP/IP

c.CORBA

d.Simple Protocol

35. DDCF stands for_____

a. Distributed Data Component Facility

b.Distributed Data Common Facility

c.Distributed Document Component Facility

d.Distributed Document Common Facility

36. Object is a CORBA programming entity that consists of an identity, an interface, and an implementation, which is known as a_____

a.Client

b. Servant

c.Server

d.ORB interface

37. _____ serve as the ``glue'' between the client and server applications, respectively, and the ORB.

a.ORB and ORB Interface

b.CORBA IDL stubs and skeletons

c.Client and servant

d.Client and server

38. _____ is used to enable clients to transparently locate and invoke persistent objects on servers in the CORBA environment.

a.orbd

b. ORB

c.ord

d.dii

39. _____Specifies the base where the ORBD persistent storage directory orb.db is created.

a. defaultdb directory

b. port -port

c. serverStartupDelay

d. serverPollingTime

40. _____ which supports dynamic client request invocation

a. ORB interface

b. ORBA Interface Repository (IR)

c. Dynamic Skeleton Interface

d. Dynamic Invocation Interface

Part B (Two mark questions)

41. _____ is a client/server infrastructure that increases the interoperability, portability, and flexibility of an application by allowing the application to be distributed over multiple _____ platforms.

a.Mainframe, homogenous

b.Database, regular

c. RPC, heterogeneous

d. file, different

42. In contrast to _____ mechanisms employed by Message-Oriented Middleware, the use of a _____ request-reply mechanism in RPC requires that the client and server are always available and functioning"

a. synchronous, asynchronous

b. asynchronous, synchronous

c. similar, different

d. different, similar

43. All transactions are either performed completely - _____, or are not done at

all; a partial transaction that is aborted must be _____."

a. Completed, turned back

b. rolled back, committed

c. committed, rolled back

d. turned back, Completed

44. Which of the following is not the relevant functions of an ORB(object request broker) technology

1. Interface definition

2. Location and possible activation of remote objects

3. Communication between clients and object"

a. 1 only

b. 2 only

c. 1 and 2

d.All are the relavant functions of ORB

45. Which of the given two factors increase the likelihood of distribution?

1. The user community prefers to support open systems .

2. The overall decrease in costs of hardware components and the increase in price-performance ratios"

a.Only 1

b.Only 2

c.Both 1 and 2

d.Neighter 1 nor 2

46. For multiprocess operating systems, the local execution space is a_____and

the global space is the _____ of all processes."

a. collection,process

b. process ,collection

c. Data,link

d.link , data

47. Single process might use a _____which would take advantage of a common address space, and multiple processes might use an _____ mechanism which would take advantage of some memory management technique such as shared memory.

a. local procedure call , inter-process communication

b. inter-process communication , local procedure call

c. Remote procedure call, Intra process communication.

d. Remote procedure call , application development communication

48. Which of the following is not the correct type of event ordering in the stand-alone environment -

1. One type occurs when a process is pending on a system or library call to complete.

2. Another type occurs when a process needs

to make an ordering decision based on the time-stamp of some well known event.

a.Only 1

b.Only 2

c.Both 1 and 2

d.Neither 1 nor 2

49. The Java RMI technology provides communication in a homogenous or heterogeneous environments by supporting a wide variety of Internet protocols like_____

a.VOIP and JRMP

b. GIOP and IITP

c. JRMP and IIOP

d.JRMP and GIOP

50. Arrange the following given steps of building powerful distributed applications with Java RMI technology in sequence:

step 1:- Define the interfaces to your remote objects

step 2:- Run RMI on remote implementation classes

step 3:- Implement the remote objects

step 4:- Make code network-accessible

"

a.1,2,4 and 3

b.1,3,2 and 4

c. 1,4,2 and 3

d. 1,2,3 and 4

51. An _____ is a remote object that is instantiated and exported in a JVM on some system and a _____ is one that is not yet instantiated in a JVM, but which can be brought into an active state.

a.passive object,active object

b.server object,client object

c.active object,passive object

d.active object ,server object

52. Which of the following statement is not correct to invoke a method on a remote object, a remote reference must be obtained. This can be done via:

1. URL-based lookup in Java RMI name facility

2. calling another object and obtaining a reference

"

a.1-T,2-T

b.1-F,2-F

c.1-F,2-T

d.1-T,2-F

53. The COM run-time provides_____ to clients and components and uses _____ and the security provider to generate standard network packets

a.Network services, RPC

b. RPC, Data services

c. object-oriented services,RPC

d. RPC and RPX

54. Once the server name and the _____ are known, a portion of the COM libraries called the _____ on the client machine connects to the SCM on the server machine and requests creation of this object.

a. COM identifier, data control manager

b.Class Identifier , service control manager

c.Unique identifier, service control manager

d.object identifier, data control manager

55. _____ authenticates only when the client establishes a relationship with the server.

_____ Authenticates only at the beginning of each remote procedure call when the server receives the request.

a.RPC_C_AUTHN_LEVEL_DEFAULT , RPC_C_AUTHN_LEVEL_CALL

b.RPC_C_AUTHN_LEVEL_CALL , RPC_C_AUTHN_LEVEL_CONNECT

c.RPC_C_AUTHN_LEVEL_CONNECT, RPC_C_AUTHN_LEVEL_CALL

d.RPC_C_AUTHN_LEVEL_PKT , RPC_C_AUTHN_LEVEL_CONNECT

56. In _____ the size of the parameters passed into a method call directly affects the time it takes to complete the call.

In _____ the physical distance and the number of network elements involved delay even the smallest data packet significantly"

a. Bandwidth, Latency

b .Latency , Bandwidth

c. Throughput, Bandwidth

d. Delay, Throughput

57. _____ which allows clients to find objects based on names.

_____ which allows clients to find objects based on their properties.

a.The Trading Service , The Naming Service

b. The Trading Service , Object Service interfaces

c.The Naming Service , The Trading Service

d.Object Service interfaces, The Naming Service

58. In _____ information is persistent across service shutdowns and startups, and is recoverable in the event of a service failure.

A _____ retains naming contexts as long as it is running. If there is a service interruption, the naming context graph is lost. "

a.transient naming service , persistent Naming Service

b.persistent Naming Service , transient naming service

c.Data naming service, transient naming service

d.persistent Naming Service , Data naming service

59. A _____ is a mechanism that effectively creates and issues requests on behalf of a client, while a _____is a mechanism that delivers re-quests to the CORBA object implementation.

a.Dynamic Skeleton Interface , stub

b.skeleton , stub

c.stub , skeleton

d.stub ,Dynamic Skeleton Interface

60. In _____ the client invokes the re-quest, and then blocks waiting for the response.

In _____ the client invokes the request, continues processing while the request is dispatched, and later collects the response."

a.Synchronous Invocation , Deferred Synchronous Invocation

b.Deferred Synchronous Invocation , Synchronous Invocation

c.Oneway Invocation , Deferred Synchronous Invocation

d.Oneway Invocation , Synchronous Invocation

Part C (Four mark questions)

61. "State whether the following statement are true or false:
1. ORB technology promotes the goal of object communication across machine, software, and vendor boundaries.
2. The most basic type of middle layer and the oldest, the concept on mainframes dating from the early 1970's is the user processing monitor.
3. ACID stands for Atomicity,Continuity, ,Integrity ,Durability."
a.1-T,2-T,3-T
b.1-T,2-F,3-F
c.1-T,2-F,3-T
d.1-F,2-F,3-T

62. State whether the following statement are true or false for three-tier software architectures .
1. Third tier can be called as middle tier server also.
2.The three tier software architecture emerged in the 1993 to overcome the limitations of the two tier architecture.
3.The third tier is between the user interface and the data management components."
a.1-T,2-T,3-T
b.1-T,2-T,3-F
c.1-T,2-F,3-T
d.1-F,2-F,3-T

63. Fill in the blanks:
1. Complementary technologies to three tier architectures are _____, three tier client/server architecture tools, and Database Two Phase Commit processing.
2. This middleware can be a _____, depending on whether synchronous or asynchronous communication is preferred.

3. _____ and Analysis can be used to capture this interapplication commonality and create a set of assets that can be effectively reused
in different application.

a. Domain Engineering ,Object-Oriented Design, Message-Oriented Middleware
b. Message-Oriented Middleware ,Domain Engineering, Object-Oriented Design
c. Message-Oriented Middleware ,Object-Oriented Design, Domain Engineering
d. Object-Oriented Design, Message-Oriented Middleware ,Domain Engineering

64. State whether the following statement are true or false:

1. Uniprocessor systems achieve concurrent programming by actually running code on more than one processor at the same time.

2. By allowing a single process to have multiple execution code segments, the segment ready to

execute can continue.

3. A network is inherently a concurrent programming environment because autonomous computing systems can be independently running a process on their

own dedicated processor(s)."

a.1-T,2-T,3-T

b.1-T,2-F,3-F

c.1-T,2-F,3-T

d.1-F,2-T,3-T

65. State whether the following statement are true or false for distributed computing environment architecture requirements.

1. there must be mechanisms to support the needs of the fundamental application development paradigms.

2. these fundamental technologies must account for the characteristics and challenges which are unique to a distributed environment.

3. these technologies must be incorporated in such a way that they have the qualities of a well formed system."

a.1-T,2-T,3-T

b.1-T,2-T,3-F

c.1-T,2-F,3-T

d.1-F,2-F,3-T

66. Fill in the blanks:

1. In a _____ each system has its own representation of time.

2. A process normally makes reference to data in two storage areas, _____

3. the stand-alone execution space, there are usually two types of objects that

need an access control mechanism: _____

4. _____ provides programmers a familiar programming model by extending the local procedure call to a distributed environment."

"a. distributed environment ,process and file, temporary and permanent ,remote procedure call"

"b. distributed environment, temporary and permanent ,process and file, remote procedure call"

"c. remote procedure call, temporary and permanent ,process and file, distributed environment"

d. remote procedure call, process and file, temporary and permanent ,process and file, distributed environment.

67. State whether the following statement are true or false:

1. Object activation is a mechanism for providing persistent references to objects and managing the execution of object implementations.

2. Distributed object systems are designed to support long-lived persistent objects.

3. Transforming a passive object into an remote object is a process known as activation.

a.1-T,2-T,3-T

b.1-T,2-T,3-F

c.1-T,2-F,3-T

d.1-F,2-F,3-T

68. State whether the following statement are true or false for characteristics of a lease:

1.A lease is a time period during which the grantor of the lease insures that the holder of the lease will have access to some resource.

2. During the period of a lease, a lease can be cancelled by the entity holding the lease.

3. A leaseholder can request that a lease be renewed.

4. A lease can't be expired. "

a.1-T,2-T,3-T,4-T

b.1-T,2-T,3-F,4-T

c.1-T,2-T,3-T,4-F

d.1-F,2-F,3-T,4-T

69. Fill in the blanks:

1. An _____contains the information necessary to activate an object.

2. The _____ in the object's descriptor is passed as the second argument to the remote object's constructor for the object to use during activation.

3. If the current group is inactive or a default group cannot be created, an _____ is thrown. "

a. ActivationException, ActivationDesc , MarshalledObject

b.MarshalledObject,ActivationException,ActivationDesc

c.ActivationException,MarshalledObject, ActivationDesc

d.ActivationDesc ,MarshalledObject, ActivationException

70. If a file is a storage file, it returns the CLSID that was written with the_____ method. If the file is not a storage file, it attempts to match various patterns in a file against entries under the _____Type registry key. If this fails, _____ uses the file extension to look up a _____ associated with this file extension.

a. GetClassFile, HKEY_CLASSES_ROOT\File,IStorage::SetClass, ProgID

b.IStorage::SetClass, HKEY_CLASSES_ROOT\File,GetClassFile, ProgID

c.HKEY_CLASSES_ROOT\File,IStorage::SetClass, ProgID, GetClassFile

d. IStorage::SetClass, GetClassFile, HKEY_CLASSES_ROOT\File , ProgID

71. State whether the following statement are true or false for three different kinds of apartments of COM that require different assumptions on behalf of the object:

1. Single-threaded apartment, main thread only: all instances are created on the different thread.

2. Single-threaded apartment: an instance is tied to a single thread, and different instances can be created on different threads.

3. Multithreaded apartment: instances can be created on multiple threads, and instances can be called on arbitrary threads.

a.1-T,2-T,3-T

b.1-T,2-T,3-F

c.1-F,2-T,3-T

d.1-F,2-F,3-T

72. The initialization protocol between the moniker and an object supports multiple initialization interfaces. The first interface the URL moniker requests is _____, which essentially hands a pointer to the moniker to the object, which then can use _____ to get to the actual data. If the object does not implement IPersistMoniker, URL moniker falls back to other initialization interfaces.

The CLSID detection mechanism is similar to the _____ mechanism, but extended to recognize MIME types and other Internet-specific type detection mechanisms.

a.IPersistMoniker , GetClassFile , IMoniker::BindToStorage

b.IMoniker::BindToStorage , GetClassFile , IPersistMoniker

c.GetClassFile , IMoniker::BindToStorage , IPersistMoniker

d.IPersistMoniker , IMoniker::BindToStorage   , GetClassFile

73 Match the following

Part A

1.Common Facilities

2.Domain Interfaces

3.Object Services

4.Application Interfaces

Part B

A. domain-independent

B. horizontally-oriented

C. specific application domains oriented

D. application-specific , but not standardized"

a. 1-B,2-C,3-D,4-A

b. 1-B,2-C,3-A,4-D

c. 1-A,2-B,3-C,4-D

d. 1-B,2-A,3-C,4-D

74. State whether the following statement are true or false

1. To specify an exception in IDL, the interface designer uses the raises keyword.

2. All CORBA system exceptions have a completion status field, indicating the status of the operation that threw the exception.

3. IIOP is a transport protocol for distributed applications written in either IDL or Java RMI. "

a.1-T,2-T,3-T

b.1-T,2-T,3-F

c.1-T,2-F,3-T

d.1-F,2-F,3-T

75. Fill in the blanks:

1. _____, serves as the glue between CORBA object implementations and the ORB itself.

2._____ allows clients to invoke requests without having access to static stubs and allows server to be written without having skeletons for the objects being invoked compiled statically into the program.

3. In _____ OAs start up server processes in which objects can be activated. "

a.Server process activation , the Object Adapter (OA), Dynamic Skeleton Interface

b.Dynamic Skeleton Interface , Server process activation , the Object Adapter (OA)

c.Dynamic Skeleton Interface , the Object Adapter (OA) , Server process activation

d.the Object Adapter (OA), Dynamic Skeleton Interface , Server process activation

Answer Keys

Part - A				Part - B		Part - C	
Q. No.	Ans. Key	Q. No.	Ans. Key	Q. No.	Ans. Key	Q. No.	Ans. Key
1	C	21	B	41	C	61	B
2	A	22	A	42	B	62	C
3	C	23	A	43	C	63	D
4	B	24	D	44	D	64	D
5	B	25	C	45	C	65	A
6	A	26	A	46	B	66	B
7	C	27	C	47	A	67	B
8	D	28	B	48	C	68	C
9	B	29	B	49	C	69	D
10	C	30	A	50	B	70	B
11	D	31	A	51	C	71	C
12	B	32	D	52	A	72	D
13	C	33	C	53	C	73	B
14	B	34	A	54	B	74	A
15	C	35	C	55	C	75	D
16	D	36	B	56	A		
17	C	37	B	57	C		
18	A	38	A	58	B		
19	C	39	A	59	C		
20	D	40	D	60	A		