

# List of multi choice questions

## Course: System Integration and Practices

1. Choose the best answer for this question “What does system integration mean?”
  - a. It means many separate systems need to become one.
  - b. More than one application, module or component that can't use anymore, so they have to replace by another new one.
  - c. **More than one application, module or component that can share data and present user with consistent information.**
  - d. More than one application, module or component that can connect to the same databases.
2. What are the advantages for integrating legacy systems?
  - a. Support for electronic commerce and cost saving.
  - b. Common security infrastructure and management information.
  - c. **Both a and b are correct.**
  - d. None is correct.
3. Why system integrated can support information management?
  - a. Because data consistency and accessibility
  - b. Because data and process consistency.
  - c. Because we can analyses historical data.
  - d. **All are correct.**
4. What is an important issue we can get when system integrated support for electronic commerce?
  - a. Greater data
  - b. **Greater security risks**
  - c. Complex process
  - d. Reliable communication of information.
5. How can the system integrated operate reliable?
  - a. Redundancy
  - b. Backup and recovery designed into the system.
  - c. Hire more employee.
  - d. **A and b are correct.**
6. Why are integration heuristics important?
  - a. Because they were the rules and formulas for the integration system.
  - b. Because system engineers have only worked on a few complex systems in their lifetime.
  - c. Because the integration system does not yet have the rules and formulas.
  - d. **Both b and c are correct.**
7. What are the basic differs from System Integration life cycle and Software Development life cycle?
  - a. Legacy system analysis.
  - b. Testing.
  - c. Dependencies.

- d. **All are correct.**
- 8. When will you choose the Agile to integrate two systems?
  - a. Defined requirements when project starts.
  - b. **When user involve to project.**
  - c. When apply for a large project.
  - d. When approach structurally
- 9. What are different types of system integration life cycles?
  - a. Presentation, Data and Functional Integration
  - b. **Waterfall, Spiral, Agile.**
  - c. Requirements and specification, design and implementation.
  - d. Requirements and specification, implementation and testing
- 10. Which phases are emphasized in system integration life cycles?
  - a. Requirements and specification
  - b. Testing, Maintenance and Retirement
  - c. **Both a and b are correct**
  - d. None is correct.
- 11. What need you do in requirements and specification phase when you want to integrate two systems?
  - a. Collect requirements.
  - b. Identify user involve
  - c. **Legacy system analysis.**
  - d. None is correct.
- 12. Why is testing in system integration more complex than in system development?
  - a. **Because design tests that are within system integrator's control**
  - b. Data adhere to specifications
  - c. Have to test all scenarios.
  - d. All are correct.
- 13. Why do the legacy systems need to remain in place until new systems are completely integrated?
  - a. To minimize changing.
  - b. To reduce cost.
  - c. **For system integrated be tested in planned.**
  - d. To operating easier.
- 14. Is process the most important choice system integration projects? Why?
  - a. Yes. Easy to control and monitor the result of project.
  - b. No. The engineers who give the solutions for the problems is the most important.
  - c. Yes. Following the process will get the right solutions.
  - d. **No. Both the engineers, who give the solutions for the problems, and process are needed.**
- 15. Which factors affect to selection process for system integration?
  - a. Ability to handle rapidly changing (unstable) set of requirements
  - b. Complexity or size of product
  - c. Suitability for small development team

- d. **All are correct.**
- 16. How many types of integration model are there? And what are they?
  - a. 4 – Waterfall, Rapid Application Development, Spiral, Agile.
  - b. 3 – Waterfall, Spiral, Agile.
  - c. 3 - **Presentation, Functional and Data Integration.**
  - d. Both a and c are correct.
- 17. Which are the characteristics of Presentation Integration?
  - a. Database is independent and may have inconsistent information.
  - b. It's read only.
  - c. **Both a and b are correct.**
  - d. None is correct.
- 18. Which is advantage of Presentation Model?
  - a. Easy to implement
  - b. Information presentation often meets user need
  - c. Legacy applications unaffected.
  - d. **All are correct.**
- 19. When is it appropriate to use the Presentation Model?
  - a. Data cannot be accessed directly.
  - b. Integrate with an application whose only useful and implementable integration is through its presentation.
  - c. **Both a and b are correct.**
  - d. Data can be accessed directly.
- 20. What are characteristics of the Data Integration model?
  - a. Data is accessed directly from all data sources.
  - b. Information can be updated in both data sources.
  - c. **A and b are correct.**
  - d. None is correct.
- 21. When is it appropriate to use the Data Integration model?
  - a. Allows data to be extracted from one source and reformatted and updated in another database.
  - b. You can combine data from multiple sources for analysis and decision making.
  - c. None is correct.
  - d. **A and b are correct**
- 22. What are the disadvantages of Data Integration model?
  - a. Data may be inconsistent
  - b. Inability to access business logic in legacy applications may constrain available functionality
  - c. Redundant code possible.
  - d. **All are correct.**
- 23. What are advantages of Functional Integration model?
  - a. **Complete access to all data and business logic and can update legacy applications if necessary.**
  - b. Can't update legacy applications.

- c. Data is inconsistent in the system.
  - d. Data is redundancy in the system.
24. What is disadvantage of Functional Integration model?
- a. Data may be consistent.
  - b. Legacy applications can unhelpful.
  - c. **It is the most difficult to implement.**
  - d. All are correct.
25. How many integrated system services are there? What are they?
- a. 3- Naming, security and authentication service.
  - b. **3-Naming, security and reliability service.**
  - c. 3-Authentication, Access control, Reliability service.
  - d. 4- Authentication, access control, balancing, data redundancy service.
26. What is a naming service?
- a. A server to store the name of system entities.
  - b. **A software that converts a name into a physical address.**
  - c. A Domain name service.
  - d. A set of names.
27. What is the problem when integrated system has naming services?
- a. Entities don't have name.
  - b. Entities can't be found
  - c. **Resolving duplicate names.**
  - d. User don't know how to find other system entities.
28. What can we do to have a security service?
- a. Load balancing and data redundancy.
  - b. **Authenticated, access control and logging activities.**
  - c. None is correct.
  - d. Both a and b are correct.
29. How can an integrated system reliability?
- a. Replication
  - b. Data redundancy.
  - c. Load balance.
  - d. **All are correct.**
30. After data sources updated, how long will the system be in the consistent state?
- a. Real time
  - b. Near real time
  - c. One day
  - d. **Based on user requirements.**
31. What is ACID stand for?
- a. Automatic- Consistency- Information- Durability.
  - b. Autonomous – Completion – Identified – Durability.
  - c. **Atomicity- Consistency – Isolation – Durability.**
  - d. Atomicity- Completion – Isolation- Durability.
32. Why are the integration guidelines important when designing an integrated system?

- a. **Because the system integrator does not have complete control over the integrated system, so minimizing dependencies and changes in each application.**
  - b. Because they are heuristics.
  - c. Because they help maximizing coupling.
  - d. Because they are the way to integrate two applications.
33. How many integration styles are there? What are they?
- a. 2- File Transfer, Shared databases.
  - b. 3- File Transfer, Shared databases, Messaging system.
  - c. **4- File Transfer, Shared databases, Remote Procedure Invocation, Messaging Systems.**
  - d. None is correct.
34. What are the disadvantages of file integration style?
- a. **The integrator workload with formats, file management, bad data.**
  - b. No special tool necessary.
  - c. Receiving application can manipulate file data.
  - d. Almost all applications use/produce files.
35. What are the advantages of shared database integration?
- a. Data is inconsistency
  - b. Multiple file formats
  - c. Database may become performance bottleneck.
  - d. **Data consistency and standard query language.**
36. What are the disadvantages of shared database integration?
- a. Data is inconsistency.
  - b. No multiple files format
  - c. **Database may become performance bottleneck.**
  - d. Single technology.
37. What are the advantages of messaging system style?
- a. Asynchronous data transfer.
  - b. Choice among topologies.
  - c. Timeliness and reliability.
  - d. **All are correct.**
38. How many architectures are there for data integration?
- a. 4
  - b. 3
  - c. **2**
  - d. 1
39. Which are common mistakes in data integration?
- a. Creating a big new database.
  - b. Integrate data at all sites.
  - c. Analyzing legacy database to finish developing a new database
  - d. **Testing without a sufficient set of real data.**
40. What is the main goal of database normalization?
- a. Restructure the logical data model of a database to eliminate redundancy.

- b. Reduce the potential for data anomalies.
  - c. Not is correct.
  - d. **Both a and b are correct.**
41. What is some of important security terms?
- a. **Authentication, authorization, Audit.**
  - b. Authentication, access control, logging activity.
  - c. Load balance, data redundancy.
  - d. None is correct.
42. What are system security architecture?
- a. The system has enough security level.
  - b. 3 security architecture to protect the system.
  - c. **The policies, procedures, and technologies that mitigate the risk**
  - d. The technologies that ensure system security.
43. What is not an important security term?
- a. Authorization
  - b. Security protocol
  - c. Non repudiation
  - d. **Replication**
44. Authorization is...?
- a. The determination of claimed identify
  - b. **The determination of access to resources**
  - c. The prevention of a principal from denying participation.
  - d. The rules that govern communications between principals.
45. What take place first to ensure security system?
- a. Automation
  - b. Authorization
  - c. **Authentication**
  - d. Atomicity
46. Which kind of technique can make sure non- repudiation?
- a. Encryption
  - b. Decryption
  - c. Defense
  - d. **Digital signatures.**
47. System should be defended in ...?
- a. Depth better than breadth
  - b. Breadth better than depth
  - c. Depth
  - d. **Depth and breadth.**
48. Which order is preferred to ensure the system defended in depth?
- a. **Protect – Detect- Recover**
  - b. Detect – Protect –Recover
  - c. Detect – Recover –Protect
  - d. Protect – Recover – Detect
49. What are advantages of symmetric key cryptography?

- a. Key are relative long.
  - b. Key must be replaced often
  - c. **The encryption and decryption algorithms can be fast in both hardware and software.**
  - d. Key distribution is easy,
50. What are disadvantages of symmetric key cryptography?
- a. Key is relatively short.
  - b. Key distribution is a problem.
  - c. Key must be replaced often.
  - d. **B and c are correct.**
51. What are advantages of Asymmetric key cryptography?
- a. Key is hard to distribute.
  - b. **Key does not have to be replaced as often and distribution is easy.**
  - c. Key is short
  - d. Key need to replace often.
52. What are disadvantages of asymmetric key cryptography?
- a. Encryption algorithms are normally slower than symmetric –Key cipher
  - b. Key much longer than 1000bits.
  - c. Security is based on the difficulty of factoring large numbers.
  - d. **All are correct.**
53. Integration of security service is...?
- a. Easy.
  - b. An option decision.
  - c. **Difficult and more risk than security of each component.**
  - d. More risk than the risk of each component.
54. What events are being logged?
- a. Read or write data
  - b. Authentication events
  - c. **A and b are correct**
  - d. None is correct
55. What is some kind of access control?
- a. **Mandatory access control, Discretionary access control, role-based access control, rule-based access control**
  - b. Mandatory access control, Role-based access control.
  - c. Multilevel access control.
  - d. None is correct.
56. What are different types of middleware?
- a. Point to point, broadcasting, CORBA.
  - b. **Message oriented middleware, Object architectures, transaction processing.**
  - c. Point to point, broadcast, MSMQ.
  - d. Com+, CORBA, Enterprise Java Beans.
57. What object architectures are commonly used?
- a. Transaction processing.

- b. Message oriented middleware.
  - c. **CORBA, COM+, EJB.**
  - d. All are correct.
58. Choose a middleware that can enforcement of ACID properties for all intersystem transactions?
- a. TPM (Transaction Processing Monitor)
  - b. OTM (Object-Transaction Monitor)
  - c. MTM (Message-Transaction Monitor)
  - d. **All are correct.**
59. Mega Money Bank's customer want to change their address through website. What's your solution for the middleware that effective and easiest to implement?
- a. **Message oriented Middleware.**
  - b. Object architectures.
  - c. Transaction processing
  - d. Object-Transaction Monitor.
60. Mega Money Bank's customer want to transfer fund from checking account to saving account through website. What's your best choices for the middleware that effectively?
- a. Message oriented middleware
  - b. Object architecture.
  - c. **Transaction processing**
  - d. All are correct.