Chapter 18
Building E-Commerce Applications and Infrastructure

True-False Questions

1. ASPs earn the majority of their revenue from charging a fixed fee for tailoring a system to specific customer needs.

   Answer: F   **Reference**: The Development Process

2. Once an EC application is built or bought, the next step is to deploy it.

   Answer: F   **Reference**: The Development Process

3. An application that has been installed and connected to existing systems is ready to be deployed.

   Answer: F   **Reference**: The Development Process

4. A merchant system provides the merchant's catalog including products, prices, and promotions.

   Answer: T   **Reference**: B2C Storefronts

5. Personalized catalogs for major buyers are essential to successful B2C storefronts, but aren't necessary in B2B storefronts.

   Answer: F   **Reference**: Supplier Sell-Side B2B Sites

6. Combining the catalog offerings of all approved suppliers into a single aggregated catalog is a proven technique in e-procurement.

   Answer: T   **Reference**: Aggregating Catalogs

7. In a reverse auction, sellers list the items they wish to sell and buyers bid to acquire those items at the lowest price.

   Answer: F   **Reference**: Reverse Auctions

8. In an exchange, there is usually a single seller and many buyers.

   Answer: F   **Reference**: Exchanges

9. Insourcing entails building an EC application within the organization.

   Answer: T   **Reference**: In-House Development: Insourcing

10. The advantage of insourcing a major EC application is it gives the company a chance to create unique options that will distinguish it from its competitors.

    Answer: T   **Reference**: In-House Development: Insourcing

11. The primary advantage of a build-from-scratch approach is that it is much faster than any of the other EC application development strategies.

    Answer: F   **Reference**: In-House Development: Insourcing

12. The buy option makes the most sense when rapid obsolescence is anticipated.

    Answer: F   **Reference**: Buy the Applications: Turnkey Approach

13. The turnkey development option in developing EC applications involves buying a functional application and installing it.

    Answer: T   **Reference**: Buy the Applications: Turnkey Approach

14. The primary advantage of the turnkey development strategy for EC applications is that the resulting system can be tailored to meet the unique needs of the application.

    Answer: F   **Reference**: Buy the Applications: Turnkey Approach

15. A company using the turnkey development strategy for EC applications eliminates the need to integrate the various applications purchased because this is the responsibility of the application providers.

    Answer: F   **Reference**: Buy the Applications: Turnkey Approach

16. Application service providers (ASPs) typically host applications at their data centers.

    Answer: T   **Reference**: Leasing

17. An advantage of using an ISP is gaining access to their expertise in Web page design.

    Answer: F   **Reference**: Other Development Options

18. A software house is an agent or vendor who assembles the functions needed by enterprises and packages them with outsourced development, operation, and maintenance.

    Answer: F   **Reference**: Other Development Options

19. System scalability is a measure of how expensive it would be to develop a system internally compared with various outsourcing options.

    Answer: F   **Reference**: Criteria for Selecting a Development Approach

20. Merchant server software is the virtual equivalent of a traditional product catalog, containing written descriptions and photos of products, along with information about various promotions, discounts, payment methods, and methods of delivery.

    Answer: T   **Reference**: Electronic Catalogs

21. A Web-based order form for making secure purchases is typically included with electronic catalog software.

    Answer: T   **Reference**: Electronic Catalogs

22. As a security measure in electronic catalogs, separate databases on separate servers are used to store the catalog (i.e., product descriptions) and to handle the details of customer orders.

    Answer: F   **Reference**: Electronic Catalogs

23. An order processing technology that allows customers to accumulate items they wish to buy while continuing to shop is called a shopping cart.

    Answer: T   **Reference**: Electronic Catalogs

24. In an EC suite, the functionality is distributed across a number of servers and databases instead of relying on a single server and database.

    Answer: T   **Reference**: EC Suites

25. In a multitier client-server architecture, the system sorts visitors into various groups and assigns them to various tiers in the system, such as having all business customers serviced by the business tier.

    Answer: F   **Reference**: Connecting to Databases and Other Enterprise
                                                           Systems

26. In multi-tiered application architecture, the database server executes business rules (e.g., user authorization), formulates database queries based on the data passed by the Web server, sends the queries to the back-end database, manipulates and formats the data resulting from the database query, and sends the formatted response to the Web server.

    Answer: F   **Reference**: Connecting to Databases and Other Enterprise
                                                           Systems

27. In multi-tiered application architecture, data and information are presented to and data are collected from the end user by the Web browser.

    Answer: T   **Reference**: Connecting to Databases and Other Enterprise
                                                           Systems

28. An advantage of multi-tiered application architecture is that the separation of functions makes it easier to change any tier (or layer) without impacting the other layers.

    Answer: T　　　　　　　　　**Reference**: Connecting to Databases and Other Enterprise Systems

29. EC sites require the integration of software applications written in different programming languages and residing on different computer hardware distributed across the Internet.

    Answer: T　　　　　　　　　**Reference**: Rise of Web Services

30. An XML document is a text file with a set of tags and content.

    Answer: T　　　　　　　　　**Reference**: Role of XML

31. A SOAP message, which is written as XML, consists of a text file with a set of tags and content.

    Answer: F　　　　　　　　　**Reference**: Simple Object Access Protocol

32. The most difficult and crucial task in evaluating a vendor and a packaged system is to determine a weighted set of detailed criteria for choosing the best vendor and package.

    Answer: T　　　　　　　　　**Reference**: Determine the Evaluation Criteria

33. The purpose of an RFP is to communicate the maximum price the buyer is willing to pay for a product.

    Answer: F　　　　　　　　　**Reference**: Determine the Evaluation Criteria

34. The most important function of the RFP is if a system purchased from a vendor doesn't perform as the buyer wants, the buyer may go back to the RFP and force the vendor to bring the system up to the standards set forth there.

    Answer: F　　　　　　　　　**Reference**: Determine the Evaluation Criteria

35. The material provided in RFPs helps the buyer identify gaps between its needs and the capabilities of the vendors and their packages.

    Answer: T　　　　　　　　　**Reference**: Evaluate Vendors and Packages

36. The contract for software specifies the price of the software and determines the type and amount of support to be provided by the vendor.

    Answer: T　　　　　　　　　**Reference**: Negotiate a Contract

37. The service level agreement specifies the maximum amount of down time allowed for an ASP.

    Answer: F　　　　　　　　　**Reference**: Establish a Service Level Agreement

38. Access logs record not only who visits a Web site, but also where visitors go and when they visit the site.

    Answer: T   **Reference**: Log Files

39. All successful EC operations succeed based on a superior understanding of Web technology.

    Answer: F   **Reference**: Managerial Issues

40. An advantage of acquiring Web tools via an ASP is the buyer can start with a minimum level of service at a low cost, then expand services as the business expands.

    Answer: T   **Reference**: Managerial Issues

Multiple Choice Questions

41. The first step in developing an EC application is:

    a. forecasting customer demand from the EC site.
    b. creating an EC architecture.
    c. selecting a development option.
    d. installing, testing, and deploying the application.

    Answer: b   **Reference**: The Development Process

42. For EC applications, operation and maintenance costs are usually:

    a. insignificant.
    b. considerably less than development costs.
    c. considerably more than development costs.
    d. as great as development costs.

    Answer: d   **Reference**: The Development Process

43. The conceptual framework for the organization of the EC infrastructure and applications is called the EC:

    a. architecture.
    b. vision.
    c. strategy.
    d. objective.

    Answer: a   **Reference**: Creating an EC Architecture

44. The measure of the quality of a user's experience when interacting with a product or system is called:

    a. customer satisfaction.
    b. acceptance.
    c. usability.
    d. memorability.

    Answer: c   **Reference**: Installing, Testing, and Deploying EC Applications

45. Testing modules one at a time is called:

    a. unit testing.
    b. usability testing.
    c. acceptance testing.
    d. integration testing.

    Answer: a   **Reference**: Installing, Testing, and Deploying EC Applications

46. Testing a combination of modules acting in concert is called:

    a. unit testing.
    b. usability testing.
    c. acceptance testing.
    d. integration testing.

    Answer: d   **Reference**: Installing, Testing, and Deploying EC Applications

47. Determining whether the site meets the original business objectives and vision is called:

    a. unit testing.
    b. usability testing.
    c. acceptance testing.
    d. integration testing.

    Answer: c   **Reference**: Installing, Testing, and Deploying EC Applications

48. Merchant services include:

    a. assistance in locating a host for a client's Web site.
    b. customer credit verification.
    c. assistance in designing client Web sites.
    d. marketing assistance for paying clients.

    Answer: b   **Reference**: B2C Storefronts

49. B2C storefronts require all of the following interrelated subsystems **EXCEPT:**

   a.   marketing system.
   b.   merchant system.
   c.   transaction system.
   d.   payment gateway.

   Answer: a   **Reference**: B2C Storefronts

50. A B2C storefront needs to offer a buyer all of the following **EXCEPT:**

   a.   a shopping cart.
   b.   a way to search for and compare products for purchase.
   c.   a way to pay for products using some form of credit.
   d.   a Web-based call center.

   Answer: d   **Reference**: B2C Storefronts

51. In e-procurement, catalog requirements include all of the following **EXCEPT:**

   a.   a storefront.
   b.   a search engine.
   c.   a comparison engine for alternative vendors.
   d.   a payment mechanism.

   Answer: a   **Reference**: E-Procurement

52. A company lists the components it needs to make its products on a Web site and invites suppliers to bid on supplying these needs. This is an example of:

   a.   a B2C storefront.
   b.   a reverse auction site.
   c.   e-procurement.
   d.   an exchange.

   Answer: b   **Reference**: Reverse Auctions

53. A Web site that brings together many buyers and many sellers is called:

   a.   a B2C storefront.
   b.   a reverse auction site.
   c.   e-procurement.
   d.   an exchange.

   Answer: d   **Reference**: Exchanges

54. A company decides to use its own IT staff to develop a Web site. This is an example of:

     a. insourcing.
     b. outsourcing.
     c. leasing.
     d. the turnkey approach.

     Answer: a   **Reference**: Development Options for EC Applications

55. A company purchases a software package and adapts its processes to the capabilities of the software. This is an example of

     a. insourcing.
     b. outsourcing.
     c. leasing.
     d. the turnkey approach.

     Answer: d   **Reference**: In-House Development: Insourcing

56. The lease option is better than the buy option in developing EC application in all of the following situations **EXCEPT:**

     a. the cost of the system is very high and the system is unproven.
     b. the buyer is a small company with limited funds available for the project.
     c. the buyer lacks the internal IT expertise to develop a complex and expensive application.
     d. the software vendor allows modifications that will exactly match the system's capabilities to the buyer's needs.

     Answer: d   **Reference**: Leasing

57. One disadvantage of an ASP is:

     a. the leasing company must make room for the operations and maintenance employees of the ASP.
     b. the leasing company gives up control of security and has to trust the ASP to adequately protect systems and data.
     c. the leasing company is responsible for maintaining the equipment the ASP provides.
     d. it is difficult to incorporate new functionality into an EC application once an ASP contract has been signed.

     Answer: b   **Reference**: Leasing

58. A disadvantage of e-malls is:

     a. revenue from sales on the site must be shared with the mall.
     b. joining an e-mall is a long, slow, complex process.
     c. the required server hardware is expensive.
     d. product selection is often very limited.

     Answer: a   **Reference**: Internet Malls

59. The amount of time required to complete an operation is called:

a. scalability.
b. throughput.
c. latency.
d. security.

Answer: c   **Reference**: Criteria for Selecting a Development Approach

60. The number of operations completed in a given period of time is called:

a. throughput.
b. latency.
c. flexibility.
d. clock speed.

Answer: a   **Reference**: Criteria for Selecting a Development Approach

61. Before selecting an EC software provider, IT asks each vendor about its willingness to assist in modifying its software to meet the specific needs of the purchasing company. IT is measuring:

a. throughput.
b. latency.
c. flexibility.
d. clock speed.

Answer: c   **Reference**: Criteria for Selecting a Development Approach

62. In selecting a shopping cart vendor, IT reviews each package for ease of use and understandability. IT is evaluating:

a. throughput.
b. latency.
c. flexibility.
d. user friendliness.

Answer: d   **Reference**: Criteria for Selecting a Development Approach

63. In selecting an EC vendor, IT contacts companies that have bought similar systems from each vendor and asks about satisfaction levels. IT is evaluating:

a. throughput.
b. latency.
c. the vendor's track record.
d. user friendliness.

Answer: c   **Reference**: Criteria for Selecting a Development Approach

64. In selecting an EC vendor, IT looks at each vendor's product to determine how systems innovations will impact the ability to upgrade this system. IT is concerned with:

   a. technological evolution.
   b. latency.
   c. the vendor's track record.
   d. user friendliness.

   Answer: a   **Reference**: Criteria for Selecting a Development Approach

65. Another name for electronic catalogs is:

   a. an EC suite.
   b. merchant server software.
   c. browser software.
   d. application server software.

   Answer: b   **Reference**: Electronic Catalogs

66. Servers which exercise business rules, send queries to the back-end database, and send formatted responses to the Web server are called:

   a. application servers.
   b. integration servers.
   c. dedicated servers.
   d. merchant servers.

   Answer: a   **Reference**: Connecting to Databases and Other Enterprise
                                                    Systems

67. The part of EC architecture that delivers Web pages is the:

   a. Web browser.
   b. Web server.
   c. application server.
   d. database server.

   Answer: b   **Reference**: Connecting to Databases and Other Enterprise
                                                    Systems

68. An XML document that defines the programmatic interface for Web services is called:

   a. SOAP.
   b. WSDL.
   c. HTML.
   d. UDDI.

   Answer: b   **Reference**: The Role of XML

69. The first step in vendor selection is to:

    a. determine evaluation criteria.
    b. evaluate software packages.
    c. identify potential vendors.
    d. negotiate a contract

    Answer: c   **Reference**: Vendor and Software Selection

70. RFPs contain requests for all of the following items EXCEPT:

    a. objectives and requirements of the system.
    b. a minimum price.
    c. the environment in which the software must operate.
    d. a list of current users of the software.

    Answer: b   **Reference**: Vendor and Software Selection

71. The communication sent to potential vendors inviting them to present a proposal describing their software package and how it would meet the company's needs is called:

    a. a bid.
    b. an RFQ.
    c. an RFP.
    d. an RFD.

    Answer: c   **Reference**: Determine the Evaluation Criteria

72. Agreed upon milestones, quality checks, how checks will be made, and how disputes will be handled should be contained in the:

    a. RFP.
    b. SLA.
    c. RFQ.
    d. candidate package.

    Answer: b   **Reference**: Establish a Service Legal Agreement

73. Text files that contain details about each individual access of a Web site are called:

    a. visitation reports.
    b. cookies.
    c. tracking logs.
    d. access logs.

    Answer: d   **Reference**: Log Files

74. The number of people who visit a site and the time of their visits can be learned by analyzing:

    a. pageview by login status.
    b. pageview by referrer.
    c. pageview by time bucket.
    d. pageview by customer software type.

    Answer: c   **Reference**: Log Files

75. The data reviewed to tell how many AOL users visited a Web site is:

    a. pageview by login status.
    b. pageview by referrer.
    c. pageview by visitor's host.
    d. pageview by customer software type.

    Answer: c   **Reference**: Log Files

76. A company is trying to decide whether to require customer log ins on its Web site. The company should look at:

    a. pageview by log-in status.
    b. pageview by referrer.
    c. pageview by visitor's host.
    d. pageview by customer software type.

    Answer: a   **Reference**: Log Files

77. In determining the success of a banner ad, a company should look at:

    a. pageview by log-in status.
    b. pageview by referrer.
    c. pageview by visitor's host.
    d. pageview by customer software type.

    Answer: b   **Reference**: Log Files

78. Technology in EC sites:

    a. is the single most important factor in the success or failure of the site.
    b. must be unique if the site is to secure a permanent place on the Net.
    c. is always very expensive.
    d. is often less important than the company's understanding of customer needs.

    Answer: d   **Reference**: Managerial Issues

79. An advantage of outsourcing is:

    a. it allows a company to start small and grow as the EC operation requires.
    b. it allows strict control over all site design secrets.
    c. it is more flexible than insourcing.
    d. it takes more time than insourced projects.

    Answer: a   **Reference**: Managerial Issues

Essay Questions

80. What are the four steps in developing an EC application?

    Answer:
    1. Create the EC architecture.
    2. Select a development option.
    3. Install, test, and deploy the applications.
    4. Operate and maintain the applications.

    Reference: The Development Process

81. In order to provide the necessary capabilities of a B2C storefront, what three interrelated subsystems are required?

    Answer:
    1. A merchant system or storefront that provides the merchant's catalog.
    2. A transaction system for processing orders, payments, and other aspects of the transaction.
    3. A payment gateway that routes payments through existing financial systems, primarily for the purpose of credit cared authorization and settlement.

    Reference: B2C Storefronts

82. Describe three strengths and three weaknesses of acquiring a turnkey EC application.

    Answer: Three of each of the following:

    STRENGTHS:
    1. Many different types of off-the-shelf software are available.
    2. It saves time and money (compared to in-house development).
    3. It requires fewer personnel dedicated to the project.
    4. The company knows what it is getting before it invests in the product.
    5. The company is not the first and only user.

    WEAKNESSES:
    1. Software may not exactly meet the company's needs.
    2. Software may be difficult or impossible to modify, or it may require huge process changes.
    3. The company may experience loss of control over improvements and new versions.
    4. Off-the-shelf applications can be difficult to integrate with existing systems.
    5. Vendors may drop a product or go out of business.

    Reference: Buy the Applications: Turnkey Approach

83. What is an ASP? Explain why a company in need of a growing EC application might be interested in contracting with an ASP.

    Answer: An ASP is an agent or vendor who assembles the functions needed by enterprises and packages them with outsourced development, operation, maintenance, and other services. An ASP manages application servers in a centrally controlled location rather than at the company's location. It is up to the ASP to provide the needed systems and software capacity, so the ASP must scale its operations to accommodate the growth of its customers. The ASP is also responsible for operating and maintaining the site.

    Reference: Leasing

84. List and explain the role of the four tiers in a multi-tiered application architecture.

    Answer:
    1. Web browser - data and information are presented to and data are collected from the end user
    2. Web server - delivers Web pages, collects the data sent by the end user, and passes data to and from the Application Server.
    3. Application server - executes business rules (e.g., user authorization), formulates database queries based on the data passed by the Web server, sends the queries to the backend database, manipulates and formats the data resulting from the database query, and sends the formatted response to the Web server.
    4. Database server - the data are stored and managed and database requests are processed.

    Reference: Connecting to Databases and Other Enterprise Systems