## Multiple Choice

1. In what SDLC stage do we determine the business needs for an information systems project?
   1. The design phase
   2. The analysis phase
   3. The dissection stage
   4. The installation stage
   5. The big bang stage

Ans: b

Reference: Transition from Requirements to Design

Difficulty: Medium

1. System design is the determination of the overall system architecture-consisting of a set of physical processing components, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and the communication among them-that will satisfy the system’s essential requirements.
   1. Workmanship
   2. Order entry methods, HR feedback
   3. Hardware, Software, People
   4. Engineering data plans, fiber optic specifications
   5. None of these

Ans: c

Reference: Transition from Requirements to Design

Difficulty: Medium

1. In the initial stage of design, what are business requirements converted into?
   1. System Requirements
   2. Work Order Summary
   3. Computer Qualifications Checklist
   4. Vanilla System
   5. Hardware Blueprint

Ans: a

Reference: Transition from Requirements to Design

Difficulty: Medium

1. Where are the decisions stored that are made regarding the hardware and software that will be purchased to support the new system?
   1. Order Manifest
   2. Hardware Sales Receipt
   3. Suppliers’ Computer System
   4. President’s Office
   5. Hardware and Software Specification

Ans: e

Reference: Transition from Requirements to Design

Difficulty: Easy

1. The system inputs and outputs will be designed along with a plan or\_\_\_\_\_\_\_\_\_\_ of the way the system’s features will be navigated.
   1. Blueprint
   2. Compass
   3. Instructional Guide
   4. Roadmap
   5. FAQ

Ans: d

Reference: Transition from Requirements to Design

Difficulty: Medium

1. This repository entries are updated to reflect specific technology decisions as they are made.
   1. DFD
   2. Sequential
   3. CASE
   4. Hardware
   5. None of these

Ans: c

Reference: Transition from Requirements to Design

Difficulty: Medium

1. Which of the following lists indicates the correct ordering of deliverables in a system specification document?
   1. System Acquisition Weighted Alternative Matrix, Interface Design, Physical Data Model Data Storage Design
   2. Data Storage Design, Interface Design, Architecture Design, Updated Crud Matrix
   3. Hardware and Software Specifications, Interface Design, Data Storage Design, Architecture Design
   4. Program Design Specifications, Physical Data Model, Data Storage Design, Architecture Design
   5. Update CASE Repository Entries, Update CRUD Matrix, Interface Design, Architecture Design

Ans: a

Reference: Transition from Requirements to Design

Difficulty: Medium

1. If on a limited time budget, the best way to be sure you remain efficient and effective in designing a system is to utilize what?
   1. Porters 5 Forces Model
   2. Outsourcing Model
   3. RAD and Timeboxing Techniques
   4. Hire/Fire Motivational Theory
   5. Not Attempt the Project

Ans: c

Reference: Practical Tip 6-1: Avoiding Classic Design Mistakes

Difficulty: Medium

1. For efficiency purposes, it is wise to do what when there is a basic software need to be satisfied?
   1. Implement a company-wide project team to handle a custom software scripting
   2. Purchase a packaged system
   3. Design a blueprint and contract an outside vendor to develop a program
   4. Make do with the current software package
   5. Utilize a professional consultant to develop a system of servers

Ans: b

Reference: System Acquisition Strategies

Difficulty: Easy

1. Workarounds are what?
   1. Not supported by a vendor who supplied the packaged software
   2. Designed by the vendor
   3. Created to interface two software packages that are compatible with each other
   4. Enterprise Wide Software Packages that are designed for satellite use
   5. None of these

Ans: a

Reference: System Acquisition Strategies

Difficulty: Hard

1. Systems Integration refers to what?
   1. The process of synching all computers to the mainframe
   2. The delivery of systems to the final destination office
   3. Combining packaged software, the existing legacy system, and new software
   4. Adding the original hard drives to a newer system
   5. Creating a new software to monitor power consumption

Ans: c

Reference: System Acquisition Strategies

Difficulty: Medium

1. What makes systems integration so difficult?
   1. Finding the original data to install on the new server
   2. Creating a ghost drive to house the old information
   3. Installing new software packages on older machines
   4. Bringing legacy system data and new data together
   5. None of these

Ans: d

Reference: System Acquisition Strategies

Difficulty: Medium

1. Another name for custom development might be what?
   1. Offshore outsourcing
   2. In-house development
   3. Vendor supplied in-house consulting
   4. CASE tools
   5. Package software

Ans: b

Response: Custom Development

Difficulty: easy

1. Outsourcing firms called \_\_\_\_\_\_\_\_\_\_\_\_\_ supply software applications and/or software related services through the Internet.
   1. Application Service Providers (ASPs)
   2. Enterprise Resource Providers (ERPs)
   3. System Development Life Cycle Companies (SDLCs)
   4. Information Technology Developers (ITDs)
   5. None of these

Ans: a

Reference: Outsourcing

Difficulty: Medium

1. A time and arrangements deal is considered what?
   1. Very flexible
   2. Very rigid
   3. Cheaper than any other option
   4. Useless when considering a systems design
   5. Always the best option for any project

Ans: a

Reference: Outsourcing

Difficulty: Medium

1. Fixed-price contracts are considered which of the following?
   1. Very flexible
   2. Very rigid
   3. Always cheaper than any other option
   4. Useless when considering a systems design
   5. Always the best option for any project

Ans: b

Reference: Outsourcing

Difficulty: Medium

1. Custom development is used when:
   1. The business need is unique
   2. The business need is not core to the business
   3. The project has a project manager who can coordinate vendor efforts
   4. The time frame is short
   5. The skills are not strategic

Ans: a

Reference: System Acquisition Strategies

Difficulty: Medium

1. Packaged systems are used when:
   1. The business need is not core to the business
   2. There is a desire to build in-house skills
   3. The time frame is flexible
   4. The project has a project manager who can coordinate vendor efforts
   5. The decision to outsource is strategic

Ans: d

Reference: Influences on the Acquisition Strategy

Difficulty: Medium

1. Application service providers might be best associated with:
2. In-house development
3. Packaged software
4. Unique and strategic systems
5. Outsourcing
6. Internet Service Providers

Ans: d

Response: Outsourcing

Difficulty: easy

1. Outsourcing is used when:
   1. The project has a project manager who can coordinate vendor efforts
   2. There is a desire to build in-house skills
   3. In-house functional and technical skills exist
   4. The business need is not core to the business
   5. None of these

Ans: d

Reference: Outsourcing

Difficulty: medium

1. Requests for Proposals (RFPs) serve what purpose?
   1. Integrate systems with one another
   2. Create synergy amongst staff members
   3. Solicit information from providers
   4. Engage mobile computers with mainframe technology
   5. Develop morale amongst managers

Ans: c

Reference: Selecting an Acquisition Strategy

Difficulty: hard

1. The following document is utilized with possible vendors on projects with smaller budgets, instead of sending a lengthy document to all possible vendors:
   1. Request for Proposal (RFP)
   2. Request for Information (RFI)
   3. Request for Quote (RFQ)
   4. Request for Efficient Information Distribution (REID)
   5. More Optimal Desires (MOD)

Ans: b

Reference: Selecting an Acquisition Strategy

Difficulty: medium

1. Which of the following is normally NOT done in the design phase of the SDLC?
2. Decisions for hardware and software purchases are made
3. User interactions are planned out (inputs, outputs, user interfaces)
4. Cost / Benefits of the new system are carefully calculated
5. Logical DFDs and ERDs are converted into physical DFDs and ERDs
6. The physical data model is created

Ans: c

Response: Transition from Requirements to Design

Difficulty: medium

1. If (a) the business need is unique, (b) there is a desire to build in-house skills; (c) the time frame is flexible, it might be best to:
2. Do in-house / custom development
3. Buy an ERP system
4. Outsource to India
5. Purchase a software package
6. Hire a consultant

Ans: a

Response: Business Need (Figure 6-5)

Difficulty: medium

1. If (a) the business need is common; (b) the skills needed are not strategic; (c) the time frame is short; it might be best to:
2. Use in-house / custom development
3. Hire a vendor to write the code for you
4. Outsource to India
5. Purchase a software package
6. Hire a consultant

Ans: d

Response: Business Need (Figure 6-5)

Difficulty: medium

1. One problem with using packages software systems is:
2. It takes a very long time to get the system and get it installed
3. The company has to accept the functionality that is provided with the system
4. Many common software packages have been written and tested and are readily available
5. There are many good software packages that are reasonable in price
6. Most software packages allow for some customization

Ans: b

Response: Business Need (Figure 6-5)

Difficulty: medium

1. An advantage of custom development might be:
2. You get a system that is tailored to the current business and meets specific needs
3. The rapid development of custom systems
4. The low cost (as compared to buying a package)
5. The low risk factor
6. The ability for in-house developers to work on systems that are in new programming languages and in technologies that are unknown to them prior to the development

Ans: a

Response: Custom Development

Difficulty: medium

1. Which is NOT a factor in choosing a development option?
2. Data base normalization
3. In-house experience
4. Time frame
5. Project skills
6. Project management

Ans: a

Response: Business Need

Difficulty: easy

1. In terms of project management, which option might require excellent project management skills and a proven methodology?
2. Outsourcing to Nebraska
3. Outsourcing to India
4. Buying a packaged solution
5. Doing custom development
6. Buying an ERP system

Ans: d

Response: Project Management

Difficulty: hard

## True False

1. In regards to packaged software, the project needs a highly skills project manager who has been with the company for many years and has an excellent relationship with both business users and the IT development staff.

Ans: False

Response: Packaged Software

Difficulty: easy

1. In regards to packaged software, the time frame is to implement is flexible to long.

Ans: False

Response: Packaged Software

Difficulty: easy

1. In regards to packaged software, it works best where the company has a unique need.

Ans: False

Response: Packaged Software

Difficulty: easy

1. In regards to packaged software, in most cases, the software is a perfect fit for the companies need.

Ans: False

Response: Packaged Software

Difficulty: easy

1. In regards to packaged software, the business need is something that is common.

Ans: True

Response: Packaged Software

Difficulty: easy

1. System requirements are communicated through a collection of design documents and physical processes and data models.

Ans: True

Reference: Transition from Requirements to Design

Difficulty: Medium

1. The decision to make, to buy, or to the design tasks that are performed throughout the rest of the design phase.

Ans: True

Reference: Transition from Requirements to Design

Difficulty: Easy

1. CASE repository entries are updated to reflect specific technology decisions as they are made.

Ans: True

Reference: Transition from Requirements to Design

Difficulty: Medium

1. Prototyping is the interface design step that often uncovers additional information that is needed in the system, leading to a revision of the physical DFDs or ERPs.

Ans: False

Reference: Transition from Requirements to Design

Difficulty: Medium

1. Building a system in-house builds technical skills and functional knowledge that one may not want to allow to walk out of the door.

Ans: True

Reference: System Acquisition Strategies

Difficulty: Easy

1. In a custom software case, all parts of the system need to be completely customized and scripted to the company’s specifications including ancillary software to the current system.

Ans: False

Reference: System Acquisition Strategies

Difficulty: Medium

1. A workaround is a custom-built add-on program that interfaces with packaged applications to handle specific needs.

Ans: True

Reference: System Acquisition Strategies

Difficulty: Medium

1. The key challenge in systems integration is avoiding a system wide crash upon installation of legacy software.

Ans: False

Reference: System Acquisition Strategies

Difficulty: Medium

1. Outsourcing requires the least in-house resources.

Ans: True

Reference: Outsourcing

Difficulty: Easy

1. Application Software Providers (ASPs) should be utilized when considering non-core programming and/custom needs.

Ans: True

Reference: Outsourcing

Difficulty: Medium

1. Time and arrangements deals are potentially more expensive if the service provider requires unforeseen resources to complete the project on time.

Ans: True

Response: Outsourcing

Difficulty: Easy

1. A common need to the business should be satisfied by contracting with an Application Service Provider (ASP).

Ans: True

Reference: Outsourcing

Difficulty: Medium

1. Custom development that can be achieved by the in-house team and core business practices are both examples of times when outsourcing is not an option.

Ans: True

Reference: Outsourcing

Difficulty: Medium

1. The only skills that are applied during systems projects are technical.

Ans: False

Reference: Project Skills

Difficulty: easy

1. The only skills that are applied during systems projects are functional.

Ans: False

Reference: Project Skills

Difficulty: easy

1. The score column in the Alternative Matrix represents how easily specific criteria are met by the alternative.

Ans: True

Reference: Alternative Matrix

Difficulty: easy

1. An IT department has just received its newest onslaught of system maintenance requests from the finance, marketing, and accounting divisions and has added them to the growing list of fixes needed. Tomorrow, there will be a request placed by the CTO that there is to be a new processing system put into place that will take the place of the current MS Word system. The best alternative is to utilize a custom program that will replace the original program.

Ans: False

Reference: Influences on Acquisition Strategy

Difficulty: easy

1. A department head is apprehensive as to what implementation system he should employ. The best method of ensuring a successful and efficient installation of the new systems would be to utilize an alternative matrix.

Ans: True

Reference: Alternative Matrix

Difficulty: easy

1. The Design phase of the SDLC uses the requirements that were gathered during analysis to actually build (and code if necessary) the final system.

Ans: False

Response: Transition from Requirements to Design

Difficulty: Medium

1. The Design phase of the SDLC builds on the logical designs from the analysis phase (like logical ERDs and logical DFDs)

Ans: True

Response: Transition from Requirements to Design

Difficulty: medium

1. The design phase decides *how* the new system will operate.

Ans: True

Response: Introduction

Difficulty: easy

1. During the initial part of design, the project team converts the business requirements for the system into system requirements.

Ans: True

Response: Transition from Requirements to Design

Difficulty: easy

1. One systems development option is to have a system developed by using an outsourcing strategy.

Ans: True

Response: Transition from Requirements to Design

Difficulty: medium

1. One systems development option is to let users build their own system using tools like Excel and Access, with support from the Microsoft help desk.

Ans: False

Response: Transition from Requirements to Design

Difficulty: medium

1. During the design phase, the project team carefully considers the nonfunctional business requirements (such as performance, cultural and political aspects).

Ans: True

Response: Transition from Requirements to Design

Difficulty: medium

1. In the analysis phase, architecture decisions are made and written up in the ‘hardware and software specifications’.

Ans: False

Response: Transition from Requirements to Design

Difficulty: medium

1. A reason to use custom development is to get exactly what you want?

Ans: True

Response: System Acquisition Strategies (Figure 6-3)

Difficulty: easy

1. A reason to use a packaged software solution is when there is no need to “reinvent the wheel”

Ans: True

Response: System Acquisition Strategies (Figure 6-3)

Difficulty: easy

1. If the expertise needed to build a system are not readily available that is a good reason to buy a packaged software solution.

Ans: False

Response: System Acquisition Strategies (Figure 6-3)

Difficulty: medium

1. Backlogs and backlog creation are a CON when discussing custom development

Ans: True

Response: System Acquisition Strategies (Figure 6-3)

Difficulty: medium

## Essay:

1. At the end of the design phase, there is a document named the *system specification* that describes the different design documents and their uses. What is the consolidated purpose of this deliverable and why is it important?

Answer

At the end of the design phase, the project team creates the final deliverable for the phase called the *system specification.* This document contains all of the design documents just described: physical process models, physical data model, architecture design, hardware and software specification, interface design, data storage design, and program design. Collectively, the system specification conveys exactly what system the project team will implement during the implementation phase of the SDLC.

Response: Transition from Requirements to Design

Difficulty: medium

1. What types of influences are there on determining the type of installation to pursue with relation to resources and the acquisition of a new system?

Answer

When considering a new system, there are five different items to consider.

First, one must consider the business need. Is it unique? Is it able to be solved with simple packaged software? Is the need core to our system? This will influence the project strategy as a whole and determine the overall expense of the project.

Second, in-house experience will determine whether or not there is enough skill located within the current set of employees to manufacture the desired outcome.

Third, project skills: do we have the ability to learn this with our programmers or will we need to outsource programmers to assist us?

Fourth, project management, can we complete the task with our current management team or will we need consultants to assist us in completing the task?

Fifth, how much time do we have? Will we be able to complete the project quickly or are we on a tight time budget? Will we need additional manpower to push the project through?

Response: Business Need (Figure 6-5)

Difficulty: medium

1. What are the three acquisition strategies? Describe them.

Answer

Custom development, packaged software, and outsourcing are the three acquisition strategies.

Custom development utilizes the project team’s skills in creating a ground-up software solution. This is often the most time consuming and demanding on in-house resources. This is a great alternative if the nature of the project is conducive to the skills already present in-house and the need is core to the business itself.

Packaged software is by far the fastest of the implementation strategies. This option is when the acquisition team installs a pre-written packaged software solution into its current IT configuration. Often times, workarounds are required to intertwine the systems; however, this takes the bulk of the programming out of the equation and doesn’t completely remove the programmers from their everyday tasks for as long as a custom development strategy.

Outsourcing utilizes external programmers and engineers. This is often expensive if the terms of the contract are not laid out clearly and accurately in the beginning. In an ideal situation, external programmers can be brought in-house so they may educate the current team for future projects. If this is not an alternative and time is of the essence, exporting the responsibilities to an external vendor can expedite the process of programming. A significant downside to outsourcing is that your system is exposed to the outside vendor’s staff, which can be a security concern if the system data and/or processes are mission-critical or of a sensitive nature.

Response: System Acquisition Strategies

Difficulty: medium

1. Jeff is an analyst. The human resources department is very unhappy with their payroll package. They want the information systems department to write them a new package as they think they have unique needs that can’t be meet with a packaged solution. What should Jeff do?

Answer

Payroll is a very common application and there are many good payroll programs on the market. Jeff really needs to understand what the problems with the current package are. Is it old (i.e. only runs on a mainframe system)? What functions does HR want to do that the package does not support? In that payroll information must be reported to state and federal officials for tax reasons, it probably does’t make sense to write a complete package but to find one that meets HR needs. After a detailed investigation, it may be best to create either an RPI or RPQ to get additional information and bids from potential vendors.

Response: System Acquisition Strategies

Difficulty: medium

1. NewTechSystems has contracted with a well-known regional consulting company (RCC). In the original contract, the agreement was for time-and-arrangements, but lately it seems like there are excessive time amounts and excessive arrangements. Sometimes what seems minor to NewTechSystems with an estimated time of under 2 hours takes RCC 20 hours. What discussions need to take place?

Answer

It would seem like RCC either has (a) slow, inept people handling this account; (b) found errors that escaped NewTechSystems view; (c) is ‘milking’ NewTechSystems for more money and being unethical. NewTechSystems needs to fully review the arrangement with RCC and review the work that is billed. Is the work needed and legitimate? A high-level meeting with NewTechSystems and Regional Consulting Company is needed now.

Response: Outsourcing

Difficulty: medium