



UVA WELLASSA UNIVERSITY



DEPARTMENT OF COMPUTER SCIENCE & TECHNOLOGY

END SEMESTER EXAMINATION – SEMESTER I – 2009/2010

CST444-2 Management Information Systems

Time allowed: 2 hours

This paper has 5 questions. Answer all questions. And attach your question paper to the answer script

Q1.

- a. What are disadvantages with following cases?

The case is about the system development, implementation and management of the following systems:

- EDI
- ERP
- CRM
- Intranet/Extranet
- Enterprise Portal
- SCM
- EAI

- b. Compare and contrast "code and fix" development, as often used in web-based e-commerce applications, with structured analysis and design. Be sure to address all phases of the development life cycle and long term maintenance in your answer.
- c. Describe in detail the Interaction Diagram (also called the Message-Trace diagram). Describe the use and applicability of this diagram in Analysis, Design, Coding, Testing, and long term maintenance.

Q2.

- a. Describe briefly about

- i. E-business model and business strategy
- ii. Extended Value Chain and supply chain management
- iii. Relationship management in value networks
- iv. Do you agree or disagree with the statement that ERP is for operational excellent not for strategic advantage?

- b. ERP implementation is much more than a technical implementation. It is a major organizational change effort. Do you think creating the CIO position will make a significant

difference in future implementation efforts? Explain why or why not. What three recommendations would you make to the new CIO,

Q3.

- a. Your firm has fallen on hard times. As a result there have been several competitors who have approached your firm's management about a merger or a buyout.

The president of your firm has asked that you develop a list of questions that a potential acquiring firm might ask about the IS function with a reason for each question. He asks you to target these questions at the CIO of the potential acquiring firm.

- b. Recent events in your area have highlighted the need to review the disaster recovery plan for your company. Your firm validates and processes medical claims for several insurance carriers. The doctor/patient submits the bill to your firm where it is review by a para-professional to determine if the charges meet the guidelines implemented by the insurance carrier.

You are preparing a briefing for the management group concerning your disaster recovery plan. List the issues would you include in your briefing and the reason for including each issue.

Q4.

Suppose that you have just been hired as a project manager at ApparelCo, a large apparel manufacturing firm that has been in business for decades. ApparelCo has many large-scale and complex information systems using both newer technologies and languages (such as .NET and Java) and more established platforms (such as AS400 mainframes and RPG). These systems are developed and maintained by a large department of in-house information systems professionals. For decades, the IS department has been using a structured systems development method that relies heavily on control, documentation, user sign-off, carefully specified processes and deliverables, and classic techniques of data flow diagramming and entity-relationship modeling.

Studies have suggested that agile methods can outperform traditional methods of software development, particularly if the agile methods used are combined and tailored to organizational needs. Your CIO is now re-thinking the current software development methods. He is considering introducing one (or more) agile development methods, but has some concerns about how to go about doing so. After all, there are sure to be training costs involved and the CIO is unsure how this would affect the well-established software project management processes at ApparelCo.

There is one more complication to the idea of moving toward a more agile software development method. Over the past few years, more and more of the developers are telecommuting either part-time or full-time. Some IS employees at Apparel have had to relocate for various reasons. Rather than losing a good employee, ApparelCo has allowed

these employees to work virtually. Many IS employees that work in the corporate office have also begun experimenting with telecommuting one to three days a week. Currently, about 20% of employees telecommute either part-time or full-time. This number is expected to increase in the future.

Write a report to the company's CIO. At a minimum, the report should include:

- a. A description of the agile software development method(s) that you feel would be most suited to this organization and how it differs from your current structured systems development approach. Justify your choice of agile method(s). Consider both the history of the firm described above as well as the fact some employees work virtually. Make whatever assumptions you need to make, but be sure to clearly state those assumptions in your paper.
- b. Five advantages and five disadvantages of moving to an agile software development method for your organization. Be sure your discussion of the advantages and disadvantages takes into account the nature of the organization and the likely context of systems to be developed. Again, make whatever assumptions you need to, but make clear what they are.
- c. Three implications for the project management process when moving from a structured method to an agile method.
- d. A recommendation as to whether the firm should adopt agile methods given the context of the firm.

- Q5. "External systems integration refers to IT-mediated transactions between independent business entities, for example, between a company and its customers, suppliers, or other business partners, such as co-producers and banks, and it is important for both economic and strategic business reasons. Today external systems integration involves many technologies and business arrangements with different pros and cons, but they can be grouped in two broad categories: one-to-one or one-to-many approaches that link an individual company with its business partners and hub-and-spoke approaches that provide the possibility of many-to-many connections. One-to-one approaches are most prevalent, though hub-and-spoke approaches may offer greatest business value in terms of cost and fit with the dynamic business environment of mergers, acquisitions, and divestitures and multi-party business arrangements, such as business process outsourcing and supply chain facilitation. Few companies today have a systematic strategy for dealing with external systems integration. Both business issues and technical issues should be addressed in an external systems integration strategy." (Excerpted from "The Future of Enterprise Integration: Strategic and Technical Issues in External Systems Integration", M. Lynne Markus et al., forthcoming report to Advanced Practices Council of SIM International.)

- a. Discuss the main business and technical considerations for developing an external systems integration strategy in one particular industry (e.g. biotechnology, hospitality, health care, legal services, telecommunications, and financial services). State whether you are taking the perspective of a single firm or of an industry consortium.
- b. Describe one type of external system integration that has been implemented in that industry. In what ways has it been "successful"? In what ways has it "failed" to reach expectations? What theories help to explain these successes and failures?
- c. What kinds of skills do IS Managers need to plan, implement and support integrated external systems? Explain your answer with consideration to your response to (a) and (b).