

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
SECOND SEMESTER SUPPLEMENTARY EXAMINATION: AUGUST 2009
INFORMATION SYSTEMS CAC 2104

Time Allowed: 3 Hours

INSTRUCTIONS

1. Answer **All Five** questions.
2. Answer each question on a NEW PAGE.

1. Identify an organization of your choice. Discuss the two types of critical success factors in relation to the sources of critical success factors that would apply to that organization. **[20 Marks]**

Critical Success Factors

- Building
- Monitoring

Sources

- Industry related CSFs. For example standard weight, standard specifications, and standard practices.
- Location based and competitive related CSFs. For example the creation of new markets, development of new products and services. Strategies of other major companies in a given industry or same line of business may provide other organizations with sources of CSFs.
- Environmental factors such as economical, political, competitive, social, and legal factors are usually sources of CSFs.
- Temporal organizational factors and seasonal patterns, recessions, booms, economic hardships, seasonal raw materials, seasonal demand and supply are some of the sources of CSFs.

2. Highlight the issues of importance to an organization in the development of an Information Strategy. Discuss the elements of note in such a strategy. **[20 Marks]**

Strategic Information Systems Planning

Planning. Information Systems Effectiveness Review (ISER)

1. Determining project's objectives, constraints, and scope.
2. Obtaining project sponsorship.
3. Identifying and scheduling employees to interview mainly at senior levels.
4. Selecting employees to form a project team.
5. Drafting a project plan or charter.

Interviewing. Critical Success Factors (CSF)

The use of a series of highly structured interviews conducted at least twice with the same interviewee designed to gather as much as possible data from the employees

in preparation for the crafting of IS strategy. Critical success factor identification and key decisions associated with the critical success factors and the associated information requirements.

Analysis. Organizational Modeling (OM).

The modeling and flow-charting stage of the SISP used to come up with a conceptual information architecture. There is need to compare and contrast gathered information to information currently generated by Information Systems that are in place or in use. The discrepancies should be observed, analyzed, understood and reported on.

Elements of the information strategic plan

- Executive Summary
- Goals
- Assumptions
- Scenario
- Applications Areas
- Operations
- Budget and required resources
- Organizational Structure
- Impact of the plan
- Implementation

3. There are a variety of costs that are associated with managing information systems in an organization. Justify the existence of outsourcing activities for an organization of your choice that has engaged an external organization to provide it with information services.

[20 Marks]

Benefits of outsourcing

- Good for small organizations, which do not have the expertise.
- Assists new and small organizations that have cash flows problems to take advantage of economies of scale and to benefit from the expertise of well established companies.
- Allows access to the latest state of the art technology.
- Enables organizations to keep abreast with advances in technology.
- Allows access to the latest state of the art technology.
- Allows a company to concentrate on essential activities by outsourcing non-core activities such as systems maintenance.
- Expensive ICT investment is avoided.
- A company is not at risk of running obsolete technology.
- With outsourcing expenses can be easily managed and budgeted for since a company is charged fixed costs instead of varying costs.
- Helps in processing seasonal data.
- Helps in processing systems overloads.
- Can be used as a stopgap measure when an organization is enhancing its own system.
- Some processes such as weather forecasting require sophisticated and specialized computer systems that are very expensive.

4. Briefly discuss the advantages and disadvantages of database systems. Identify five (5) practical database applications that are in existence today. **[20 Marks]**

Advantages

- Data sharing
- Reduced data redundancy
- Improved data consistency
- Data program independence
- Improved data administration and control
- Emphasis on data as a corporate resource
- Reduced data duplication

Disadvantages

- Concurrency problems
- Ownership
- Expensive to manage
- Data insecurity – security essential

5. Apply the systems development lifecycle to the development of an information system for StarOne a multinational banking institution employing the latest state of the art technology. **[20 Marks]**

Stages

- Preliminary investigation
- Analysis
- Design
- Development
- Implementation
- Support and maintenance