AFRICA
UNIVERSITY

(A United Methodist-Related Institution)

"Investing in Africa's Future"

FACULTY OF MANAGEMENT AND ADMINISTRATION

COURSE TITLE: CIS 401 – Systems Analysis Design and Implementation

SEMESTER I: FINAL EXAMINATION NOVEMBER, 2014

LECTURER: MR T MAKAMBWA

TIME: 3 HOURS

INSTRUCTIONS

Answer *All* Questions in **Section A** and *any* three Questions from **Section B**. Total possible mark is **100.**

Start **each** question on a new page on your answer sheet.

The marks allocated to **each** question are shown at the end of the section.

Credit will be awarded for logical, systematic and neat presentations.

Section A (40 Marks)

Answer all questions in this section

Question One

A fast-food organization has expanded the number of out lets around a city. At the moment the outlets use conventional cash tills. The organization would like to implement a Point-Of-Sale (POS) system in all its outlets with linkages to a centralized computer.

Assume you are the organization's systems analyst and you have been asked to assist in the conversation process from the existing system to the new one :
(a) evaluate the change-over options that are available and recommend the most suitable method for the new system.   **(12marks)**

(b) Construct a sequential check list for the activities to be carried out during the implementation process.   **(8marks)**

Question Two

Extensive documentation is needed throughout the life cycle of a computer system. The analysis and design stages generate part of the overall documentation.

(a) Name the main items of documentation, state their purpose, and describe briefly their contents under the following headings:

(1) Project management.
(2) Systems analysis stage.
(3) Systems design stage.
(4) Development (implementation).
(5) User documentation.   **(16 Marks)**

(b) Name ONE other component of the system documentation, summarise its contents, and indicate when it is produced in the project.   **(4 Marks)**

Section B

Answer *any* three questions

Question Three

Traditional methods of systems analysis and design have proved successful in many types of project. However, serious problems with traditional methods have led to the emergence of Structured Systems Analysis and Design Methodologies such as SSADM. While improving the quality of computer systems, SSADM has not provided a complete remedy for project problems.

a. Describe the types of computer project which have been successful under **(4 marks)**

b. List and explain common problems in projects using conventional systems analysis and suggest reasons for the problems. **(8 Marks)**

c. Explain how SSADM helps to improve computer systems and discuss any limitations with the methodology. **(8 Marks)**

Question Four

a) Explain when in the system development life cycle a requirements document would be produced, and describe the contents of a requirements document.

(15 marks)

b) Explain the difference between a functional and non functional requirement. Identify **three** types of non functional requirement. **(5 marks)**

Question Five

User involvement is important for the success of computer projects. The user can contribute to several stages of the project cycle.

(a) List the stages in a typical computer project. **(6 Marks)**

(b) For THREE of these stages, describe how the user can contribute and how the computer project will benefit from this involvement. **(9 Marks)**

(c) Suggest what problems might arise in a project:
(i) With insufficient user participation.
(ii) With excessive user involvement. **(5 Marks)**

Question Six

a) Define and state the reasons of outsourcing. **(6 marks)**

(b) State and explain four reasons of running a new information system on the existing platform. **(6 marks)**

(c) Differentiate between user documentation and system documentation. **(4 marks)**

(d) Explain the difference between verification and validation. Give an example of a technique that can be used for each. **(4 marks)**

Question Seven

(a) Compare and contrast the 'hard' and 'soft' approaches to information systems development. **(4 marks)**

b) Discuss the main features of alternative approaches to Information Systems under the following headings
  i.   Rapid Application Development(RAD**)** **(4 marks)**
  ii.   Joint Application Development(JAD**)** **(4 marks)**
  iii. Object -Oriented Design(OOD) **(4 marks)**

c) Explain the role of Computer Assisted Software Engineering (CASE) tools in System Development**.** **(4 marks)**

Question Eight

a) State the factors that influence the maintainability of systems. **(8 marks)**
b) State and explain any four types of system maintenance. **(12 marks)**