

UGANDA MARTYRS UNIVERSITY
FACULTY OF SCIENCE
FINAL ASSESSEMENT SEMESTER TWO 2009/2010
SYSTEMS ANALYSIS AND DESIGN
BSC II IT & GEN

DATE: 3rd MAY 2010

TIME: 9:00am – 12:00Noon

Instructions

The paper is composed of sections A and B. Attempt four questions in section A and one question in section B. Each question carries 20 marks

You are one of the people who have been recently employed by Uganda Martyrs University (UMU) as a senior Systems Analyst. In this position you are expected to have a thorough understanding of UMU's organizational objectives, organizational structure and business processes besides being knowledgeable on how to exploit information technology for advantage. As a senior Systems Analyst you have a wealth of knowledge, skills and experience with software engineering principles, techniques, methodologies, tools and environments used for analysis and design of information systems.

Assume UMU management has signed a contract with developers in SyncSoft – Uganda Ltd to develop its proposed web-based Electronic Learning Management System (ELMS) to promote its academic excellence both in its teaching and in its research programmes. As a member of the steering committee of UMU you are a key link between the developers and UMU management.

After a thorough planning phase, requirements are collected using the traditional approaches. At design phase you recommend that the system be run on a client-server architecture. The project requires certain deliverables to be produced at each stage of the development process.

With the above background in mind now attempt the following questions.

SECTION A

1. (a) Outline five activities you would perform during project initiation. (5 marks)
(b) State five main activities you would perform during project planning. (5 marks)
(c) Describe the contents of the baseline project plan during project initiation and planning. (10 marks)
2. Describe six categories of project feasibility you would use to assess the feasibility of this project. (20 marks)
3. (a) State eight reasons why you would need to study and understand the current system. (8 marks)
(b) Explain four aspects each of functional and non-functional requirements you would need to know. (12 marks)
4. Explain each of the following system requirements collection techniques you could use
 - (a) Three suitable sources of information for Background reading. (6 marks)
 - (b) Appropriate situation for each of at least four fact-finding techniques. (8 marks)
 - (c) Four advantages of using Observation to collect systems requirements. (4 marks)
 - (d) Two advantages of using Questionnaire to collect systems requirements. (2 marks)
5. For each of the following phase-specifications, formulate a set of five activities and their corresponding deliverables for your project.
 - (a) Analysis (6 marks)
 - (b) Design (7 marks)
 - (c) Implementation (7 marks)

SECTION B

6. Answer the following questions about roles and skills required of a systems analyst
- (a) Outline four roles you would be expected to perform in UMU. (4 marks)
 - (b) Explain six elements of organizational knowledge required of you in UMU.(6 marks)
 - (c) Explain eight elements involved in understanding a wide variety of technologies in UMU. (8 marks)
 - (d) Mention four categories of management skills required of you in UMU. (2 marks)
7. (a) Outline eight objectives for the use of CASE tools during the development of the proposed ELMS system. (8 marks)
- (c) Explain six types of CASE tools at your disposal during development of the ELMS system. (12 marks)

END