KIBABII UNIVERSITY COLLEGE
(A Constituent College of MasindeMuliro University of Science Technology)
P.O. Box 1699-50200 Bungoma, Kenya
Tel. 020-2028660/0708-085934/0734-831729
E-mail: enquiries@kibabiiuniversity.ac.ke

UNIVERSITY REGULARY EXAMINATIONS
2012 /2013 ACADEMIC YEAR

FOR THE DEGREE OF BACHELOR
OF SCIENCE (COMPUTER SCIENCE)

(MAIN EXAMINATION)

COURSE CODE: CSC 222

COURSE TITLE: SYSTEMS ANALYSIS AND DESIGN

DATE: 22nd August, 2013   **TIME:** 9.00a.m – Noon
_____

INSTRUCTIONS TO CANDIDATES

- Answer questions one and any other two questions

QUESTION ONE

i.   In the context of information systems, state Eight characteristics of a system (8mks)

ii. An information system is essentially a group of components working together to capture and deliver information to users.

  What are these components? (2mks)

iii. Define the following terms as used during system analysis project (2mks)

  i.   Prototyping

  ii. Fact – finding.

iv. The system analyst is sure to confront a number of problems including resolving conflict user objectives. Identify and explain any three other problems. (3mks)

v.   There are a number of categories of system users with whom the system analyst may interact. Who is a system user? Describe two of these users (3mks)

vi. The system development Life Cycle is principally a four stage process. Describe this cycle (4mks)

vii. What is a system change over? State any two methods of system changeover and explain their application (6mks)

viii. What is problem recognition (2mks)

QUESTION TWO

(a) Explain what is meant by tangible and non – tangible benefits citing an example in each? (4mks)

(b) Identify and explain any three skills an analyst should possess (3mks)

(c) What is structured analysis? Explain its importance (3mks)

(d) The DFD and Data dictionary are some of the tools used in structured analysis. Define and explain the importance of these tools in system analysis project (2mks)

(e) What is a requirement document and what does it contain (4mks)

QUESTION THREE

(a) Define and explain the significance of the following information gathering tools.

    (i) Interviews   (2mks)

    (ii) Observation

(b) Why is it important that the analyst learns about an organizations policies and objectives when carrying out system analysis?   (3mks)

(c) List any three errors in requirements analysis and for each error give two possible solution's.   (9mks)

(d) State and briefly explain three design tools.   (3mks)

(e) Explain three reasons why system analysts do sampling.   (3mks)

QUESTION FOUR

(a) Define the term feasibility study?   (2mks)

(b) Explain the appropriateness of economic and behavioral feasibilities?   (4mks)

(c) Give detailed differences between dataflow diagrams and an entity relationship diagram.   (4mks)

(d) The waterfall model applied to system analysis and design project has a number of limitations. Explain any three.   (6mks)

(e) Give four reasons why analysts rely on automated tools like computer aided systems engineering (CASE- tools)   (4mks)

QUESTION FIVE

(i) Construct the context diagram and level 1 DFD for the scenario below

Students apply for a CD rental card. They fill out a form and provide a means for verifying their identity. They are issued a CD rental card. Students rent CDs by giving the clerk their CD rental card and their CDs. The clerk totals the amount of rental, which is received from the student. Students are given receipt with due date on it. A record is created for each item rented. Students return CDs, if the item is returned late a note and the amount of the late fee is made on the record. If the student has a late fee he/she is required to pay the amount the next time an item is rented. The company has several

other policies to provide a competitive edge in the CD rental market. Once a month the student rental records are renewed for the student who have rented more than the bonus level, currently set at Ksh 50 bonus. Students are sent a letter thanking them for their business as well as issuing them several free rental coupons (depending on the amount of rental for the month).

Once a year the student records are examined for students who have rented more than a yearly bonus level, (currently at Ksh 250). A letter, a free rental coupon and a certificate for a free CD, (if the student has rented over two times the bonus level) are sent to the student. (15mks)

(ii) List and explain any five user interface design principles. (5mks)