JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF INFORMATION AND INNOVATIVE SYSTEMS

UNIVERSITY EXAMINATION FOR DEGREE OF BACHELOR OF SCIENCE

1ST YEAR 1ST SEMESTER 2013/2014 ACADEMIC YEAR

MAIN REGULAR

COURSE CODE: IIT 3215

COURSE TITLE: SYSTEM ANALYSIS AND DESIGN

EXAM VENUE: **STREAM: (BSc)**

DATE: 25/04/14   **EXAM SESSION: 9.00 – 11.00 AM**

TIME: 2.00 HOURS

Instructions:

1. **Answer question 1 (Compulsory) and ANY other 2 questions**
2. **Candidates are advised not to write on the question paper.**
3. **Candidates must hand in their answer booklets to the invigilator while in the examination room.**

Question One 30 MARKS
a) Define a system and highlight its   major components.   (4marks)
b) Name and describe the participants in systems analysis and design   (8 marks)
c) Discuss three types of maintenance that an be performed to a system   (6 marks)
d) Discuss different types of feasibility analysis.   (8 marks)
e) Explain the different factors considered in the identification of a problem to be
   considered for computerization.   (4 marks)

Question Two 20 MARKS
a) Outline and discuss one systems development model.   (6 marks)
b) Discuss different phases in system development life cycle   (8 marks)
c) Explain why its necessary to have good documentation of the system processes and
   data about the target system   (6 marks)

Question Three 20 MARKS
a) Discuss five merits and demerits of systems development methodologies.(10 marks)
b) Differentiate between Top down functional decomposition and object oriented
   decomposition as forms of design approaches   (4 marks)
   Highlight Six characteristics of a good design.   (6 marks)

Question Four 20 MARKS
a) An Information System Architecture (ISA) is a "*conceptual blueprint or plan that
   expresses the desired future structure for information systems in an organization*".
   Discuss   (4 marks)
b) Outline and discuss the components of the Zachman ISA Framework.   (6 marks)
c) Discuss Four characteristics of a good requirement specification document .
   .   (4 marks)
d) Explain what are CASE tools and how are they used in systems analysis and design
   .   (6 marks)

Question Five 20 MARKS
a) Discuss the different types of relationships found between entities in database
   design   (6 marks)
b) Data dictionary is an important tool for documentation. Explain what data dictionary
   is and how it's used in system development.   (4 marks)
c) As a system developer, discuss five factors you will consider so as to design a user
   friendly system software   (10 marks)