JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS

UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR SCIENCE IN SECURITY AND FORENSICS

3RDYEAR 1ST SEMESTER 2015/2016 ACADEMIC YEAR

MAIN CAMPUS

COURSE CODE: IIT 3215

COURSE TITLE: SYSTEM ANALYSIS AND DESIGN

EXAM VENUE: **STREAM: Bsc IS,ICT,**

DATE: April 2016   **EXAM SESSION:**

TIME: 2.00 HOURS

INSTRUCTIONS:

1. Answer Question 1 (Compulsory) and ANY other two 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) What is a software development methodology (2 marks)

b) Using a diagram explain System Development Life Cycle (4 marks)

c) Define a system. Explain the components of a system. (5 marks)

d) Describe the benefits of using tool in the development of information system (5 marks)

e) Explain the characteristics of a software citing the importance in system analysis . (5 marks)

f) Explain DFD in respect to system development and illustrate using appropriate symbols (5 marks)

g) Discuss in depth Functional and non-functional requirements of systems (4 marks)

QUESTION TWO [20 MARKS]

a) During changeover to a new system, a strategy needs to be adopted in order to transition to the new system. Briefly list and explain **THREE** such strategies **(8 marks)**

b) What's the difference between logical and physical model **(4 marks)**

c) Explain any **FOUR fact finding** techniques used for gathering of data during system development citing advantages: **(8 marks)**

QUESTION THREE [20 MARKS]

a) Explain the relevance of feasibility study in today's software development (5 marks)

b) Explain Rapid Application Development (RAD) as methodology of software development (5 marks)

c) Discuss any five factors affecting the cost of Maintenance [10 Marks]

QUESTION 4 [20 MARKS]

a) What is user requirements and how do we determine the users requirements (5 marks)

b) Explain any three importance of prototyping in systems development. (10 marks)

c) Business drivers influence information systems. What are the Current business drivers that will continue to influence the development of information systems

(5 marks)

QUESTION 5 [20 MARKS]

a) With an aid of a diagram, explain the basic working principles of the Spiral model of software development listing two merits and demerit. (**10 marks)**

b) Briefly explain challenges experienced in system analysis and design and highlighting how these would contributed to Software development failure

(10 marks)