JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS

UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR SCIENCE IN

INFORMATIONAND COMMUNICATION TECHNOLOGY

2ND YEAR 1ST SEMESTER 2015/2016 ACADEMIC YEAR

MAIN CAMPUS

COURSE CODE: ICT 3211

COURSE TITLE: SYSTEM DEVELOPMENT METHODOLOGY

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

DATE: April 2017   **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   [6 marks]

c) Explain the roles of a system analyst   [6 marks]

d) Explain how STEPWISE REFINEMENT as analytical can be used for solving complex problem   [4 marks]

e) Explain the critical phases of system documentation process/ system requirement specification   [6 marks]

f) 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

[6 marks]

QUESTION TWO [20 MARKS]

a) Explain the components/Elements of a system stating their relevance in system development   [6 marks]

b) Using appropriate syntax and a block diagram explain any two control structures in programming   [4 marks]

c) Discuss in depth Functional and non-functional requirements of systems

[4 marks]

d) Explain three different models of User Interface design   **[6marks]**

QUESTION THREE [20 MARKS]

a) Explain the relevance of feasibility study in today's   software development economy   **[4 marks]**

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

c) Explain the difference between User requirements and Systems requirements

[4 marks]

d) What is an array? Explain how three dimensional array are declared [2 marks]

e) Explain the key activities during system design that happen as part of system design in module designing are   [5 marks]

QUESTION 4 [20 MARKS]

a) List and explain any **FOUR** factors affecting the success/failure of IT Systems in an organization **[4 marks]**

b) Explain the role External requirements in software development and the how it would affect the quality of software [6 marks]

c) A system analyst was tasked to perform an interface analysis in the part of software development. List and explain the key factors that must be considered in carrying the above task [6 marks]

d) System implementation is a very vital stage in SDLC, confirmation about functionality of the system takes place at this stage. Briefly describe this stage and explain **FOUR** activities undertaken at this stage **[4 marks]**

QUESTION 5 [20 MARKS]

a) With an aid of a diagram, explain water fall model of software development listing two merits and demerit. [8 **marks]**

b) Explain the process of evaluation of software project to ensure that the best alternative decision are at when deciding on the software to be developed

[6 marks]

c) The Concepts of inheritance and Abstraction data are critical in modern software development methodology discuss [4 marks]

d) What is the system requirement specification(SRS) [2 marks]