



# JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY:

Course Title: SYSTEM BUILDING

Course Code: IIT 3122

YEAR 1 SEMESTER 2

Mode of Study: SELF SUPPORT PROGRAM

KISUMU LEARNING CENTRE

AUGUST-DECEMBER 2013

TIME: 2 HOURS

## INSTRUCTIONS:

1. This paper contains FIVE questions
2. Question one is **Compulsory** and any other two questions
3. Answers questions in the book let provided

### QUESTION ONE (30 MARKS)

- a) Define project management [2marks]
- b) Highlight team building process that would keep a software development team cohesive [8marks]
- c) Explain the following Object oriented design [6marks]
  - i. Object
  - ii. Class
  - iii. abstraction
- d) What is a system?, Explain the components of a system [6marks]
- e) Explain five importance of project schedules in project management [10marks]

### QUESTION TWO (20 MARKS)

- a) Explain the following software development techniques [6marks]
  - i. RAD. Rapid application development model
  - ii. Prototyping technique
  - iii. Water fall model
- b) List and explain at least two aspects of feasibility study [4marks]
- c) What are the roles of system analyst [4marks]
- d) Explain any three elicitation techniques in system development life cycle [6marks]

### QUESTION THREE (20 MARKS)

- a) Data collection is a key principle in system building while collecting the use requirements , explain the data collection techniques used in system building [8marks]
- b) Define the following tools and techniques used for project management
  - i. Ghent Chart [2marks]
  - ii. Project Evaluation Review Techniques [2marks]
  - iii. Work bench structure [2marks]
- c) Explain sequence diagram in Unified modeling language by highlight its components [6marks]

### QUESTION FOUR (20 MARKS)

- a) Explain the importance of work breakdown structure in a project management [5marks]
- b) Define and explain the roles of the following in system building process;
  - i) Data Flow Diagram (DFD) [3marks]
  - ii) Object Modeling [3marks]
  - iii) Unified Modeling Language (UML) [3marks]
  - iv) Entity-Relationship Diagram (ERD) [3marks]

**QUESTION FIVE (20 MARKS)**

- a) Identify four key players in system development and software development and highlight their roles [8marks]
- b) Discuss the following object oriented programming concepts [4marks]
  - i. Abstraction
  - ii. Inheritance
- c) Why it is necessary to give good system documentation in system development [4marks]
- d) Explain two fundamental data types used in SQL (Sequel Query Language) [4marks]