



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL INFORMATICS AND INNOVATIVE SYSTEMS
UNIVERSITY EXAMINATION FOR THE DEGREE OF SCIENCE
COMPUTER SECURITY & FORENSICS
1ST YEAR 2ND SEMESTER 2020/2021 ACADEMIC YEAR
RESIT

COURSE CODE: IIT 3122

COURSE TITLE: SYSTEM BUILDING

EXAM VENUE:

STREAM: BSc. Computer Security & Forensics

DATE:

EXAM SESSION:

TIME: 2 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 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 high light their roles [8marks]
- b) Discuss the following objected 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]