



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS
UNIVERSITY EXAMINATION FOR THE DEGREE IN BACHELOR OF SCIENCE
BUSINESS INFORMATION SYSTEMS
1ST YEAR 2ND SEMESTER
2024/2025 ACADEMIC YEAR
MAIN CAMPUS

COURSE CODE: ITB2108

COURSE TITLE: BUSINESS INFORMATION SYSTEMS DEVELOPMENT

VENUE: CL 1

STREAM: BIS

DATE: 25/4/2025

EXAM SESSION: 15.00-17.00

TIME: 2.00 HOURS

INSTRUCTIONS:

- 1) Answer QUESTION ONE (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**
- 4) Mobile phones are NOT allowed in the examination room.**

QUESTION 1 (30 Marks)

- a) Explain the difference between the Predictive and Adaptive approaches to the Systems Development Life Cycle (SDLC). (6 marks)
- b) Differentiate between the Parallel Model and the Phased Model of SDLC. (4 marks)
- c) List two advantages and two disadvantages of the Prototyping Model. (4 marks)
- d) Explain the concept of Object-Oriented Development and discuss its three key phases. (8 marks)
- e) Explain the four main system deployment strategies (8 marks)

QUESTION 2 (20 Marks)

- a) Describe the main phases of the Systems Development Life Cycle (SDLC) and the primary activities involved in each phase. (10 marks)
- b) What is Rapid Application Development (RAD), and how does it differ from traditional SDLC approaches (10 marks)

QUESTION 3 (20 Marks)

- a) Explain the Waterfall Model with a diagram. Discuss its advantages and disadvantages. (10 marks)
- b) Describe the difference between Structured Analysis and Object-Oriented Analysis. (10 marks)

QUESTION 4 (20 Marks)

- a) Explain how structured programming techniques improve software quality and maintainability. (10 marks)
- b) As a system developer, discuss five factors you will consider so as to design a user friendly system (10 marks)

QUESTION 5 (20 Marks)

- a) Explain the role of Data Flow Diagrams (DFDs) and Entity-Relationship Diagrams (ERDs) in system modeling. (10 marks)
- b) Define CASE tools and explain their role in SDLC with examples. (10 marks)