



MAASAI MARA UNIVERSITY

**REGULAR UNIVERSITY EXAMINATIONS
2017/2018 ACADEMIC YEAR
FOURTH YEAR SECOND SEMESTER**

**THE DEGREE OF BACHELOR OF SCIENCE IN
COMPUTER SCIENCES**

**COURSE CODE: COM 321
COURSE TITLE: COMPILER DESIGN**

DATE: 16TH APRIL 2018

TIME: 11.00A.M. -1.00P.M.

**INSTRUCTIONS: SECTION A IS COMPULSORY ATTEMPT
TWO QUESTIONS IN SECTION B**

SECTION A

QUESTION ONE

[30 MARKS]

- A. Define a loader? (3 MARKS)
- B. Discuss the two parts of compilation? (4 MARKS)
- C. List the subparts or phases of analysis part (3 MARKS)
- D. Depict diagrammatically how a language is processed (5 MARKS)
- E. Define IS lexical analysis? (3 MARKS)
- F. List the various phases of a compiler (6 MARKS)
- G. Discuss finite automation (4 MARKS)
- H. Explain what a Translator is (2 MARKS)

SECTION B

QUESTION TWO

[20 MARKS]

- A. Discuss a symbol table? (4 MARKS)
- B. Mention some of the sisters of a compiler. (3 MARKS)
- C. Explain the role of semantic analysis? (4 MARKS)
- D. Mention the back-end phases of a compiler (2 MARKS)
- E. Define compiler-compiler (2 MARKS)
- F. List the various compiler construction tools (5 MARKS)

QUESTION THREE

(20 MARKS)

- A. Differentiate tokens, patterns, lexeme. (3 MARKS)
- B. Define syntax and semantics. (2 MARKS)
- C. State the problems in code generation. (2 MARKS)
- D. Explain the various error recovery strategies for a lexical analysis (5 MARKS)
- F. Discuss the basic issues in parsing (2 MARKS)
- G. Explain a context free grammar. (6 MARKS)

QUESTION FOUR

(20 MARKS)

- A. Discuss the benefits of intermediate code generation? (3 MARKS)
- B. Explain the various types of intermediate code representation (3 MARKS)
- C. Show the intermediate code representation for the expression a or b and not c? (3 MARKS)
- D. Discuss the properties that a code generator should possess. (3 MARKS)
- E. Explain the goals of error handler in a parser (4 MARKS)
- F. Discuss the two functions of parser? (4 MARKS)

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