

TECHNICAL UNIVERSITY OF MOMBASA
FACULTY OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING

EEE2205 ENGINEERING SOFTWARE DEVELOPEMNT AND APPLICATIONS I

SERIES: MAY 2016

QUESTION ONE

- (a) State and explain any FIVE system analysis models (5 marks)
- (b) Draw a use case diagram for the transactions at a bank ATM (5 marks)
- (c) Software is required to manage shipment of computers. Use this scenario to model the software using:
 - i. class diagrams
 - ii. Sequence diagram (10 marks)

QUESTION TWO

- (a) Distinguish between software and software process (4 marks)
- (b) Explain the following software process activities:
 - i. Software specification
 - ii. Software development
 - iii. Software validation
 - iv. Software evolution (8 marks)
- (c) (i) Explain the following types of software
 - I. Generic
 - II. Customised
- (ii) Explain any TWO attributes of a good CASE (8marks)

QUESTION THREE

- (a) (i) Distinguish between primary key and candidate key as used in databases
- (ii) Using diagrams, explain the following
 - i. One to one relationship
 - ii. Many to many relationship (8 marks)
- (b) Outline the steps to be following in drawing an entity relationship diagram (8 marks)
- (c) Draw an entity relationship diagram for borrowing and returning a book in a library (6 marks)

QUESTION FOUR

(a) (i) State any TWO

- I. conditional statements and
- II. Repetition statements

(ii) Write Visual Basic statements for the statements in a (i) above (12 marks)

(b) Write a Visual Basic program to display integers 1 to 10 (8 marks)

QUESTION FIVE

(a) Explain the FOUR methods of declaring variables in Visual Basic (8 marks)

(b) Using a diagram, describe the spiral model of system development (8 marks)

(c) State any FOUR CASE tools (4 marks)