

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

DEPE4

EEE2205 ENGINEERING SOFTWARE DEVELOPEMNT AND APPLICATIONS I

SERIES: MAY 2016

QUESTION ONE

- (a) (i) Define the following terms as used in software engineering
- I. Software
 - II. Software process
- (ii) Distinguish between software engineering and computer science
- (ii) Explain the following types of software
- I. Generic
 - II. Customised (12 marks)
- (b) Using a diagram, describe the waterfall model of software development (8 marks)

QUESTION TWO5

- (a) Explain the functions of the following system analysis models:
- i. Data flow models
 - ii. Composition model
 - iii. Architectural model
 - iv. Classification model
 - v. Stimulus model (5 marks)
- (b) Draw a class diagram for the ordinary transactions in a savings bank account (5 marks)
- (c) Software is required to manage shipment of computers. Use this scenario to model the software using:
- i. Use case diagrams
 - ii. Sequence diagram (10 marks)

QUESTION THREE

- (a) Explain the following term giving ONE example in each case
- i. Entity
 - ii. Attribute
 - iii. Primary key
 - iv. Composite key (8 marks)
- (b) Outline the steps to be following in drawing an entity relationship diagram (8 marks)
- (c) Draw an entity relationship diagram for a purchase order (6 marks)

QUESTION FOUR

- (a) (i) Write statements in Visual Basic to declare any THREE data types
- (ii) Write Visual Basic statements for each of the following:
- I. If statement
 - II. If-else statement
 - III. While statement
 - IV. For statement
 - V. Do-while statement
- (b) Write a Visual Basic program to display integers 1 to 10

(11 marks)

(9 marks)

QUESTION FIVE

- (a) Describe the THREE types of modules available in Visual Basic (9 marks)
- (b) Using a diagram, describe the spiral model of system development (8 marks)
- (c) State any THREE CASE tools (3 marks)