



TECHNICAL UNIVERISTRY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF ELECTRICAL & ELECTRONIC ENGINEERING

DIPLOMA IN ELECTRICAL POWER ENGINEERING (DEPE 4)

EEE 2205: ENGINEERING SOFTWARE DEVELOPMENT & APPLICATION I

END OF SEMESTER EXAMINATION

SERIES: DECEMBER 2014

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*

This paper consists of **FIVE** questions. Answer any **THREE** questions

Maximum marks for each part of a question are as shown

This paper consists of **TWO** printed pages

Question One (Compulsory)

- a) Highlight any FIVE benefits of organizing system information in form of a database as compared to other conventional methods of information management. **(10 marks)**
- b) During VB application development, a database can be created using the Visual Data Manager in the add ins menu. List all the steps involved. **(10 marks)**

Question Two

- a) Describe the THREE stages of developing a VB application **(10 marks)**
- b) Design a suitable VB interface and write a VB program for the following quadratic formular.

$$X = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

(20 marks)

Question Three

- a) List any FIVE controls found in the VB toolbox, stating specific function of each. **(10 marks)**
- b) Develop a VB application that finds factorial of numbers 1 to 5 **(10 marks)**

Question Four

Using picture box and other suitable VB controls, develop a VB application for the operation of traffic lights. Design a suitable interface for the application. **(20 marks)**

Question Five

- a) Write VB codes for the following:
 - (i) Adding records to a database
 - (ii) Deleting records from a database
 - (iii) Saving/updating records
 - (iv) Moving to the next record
 - (v) Moving to the previous record **(5 marks)**
- b) Describe the function of any FIVE elements/windows of the VB IDE **(10 marks)**
- c) Write a DO...WHILE..LOOP VB program that displays numbers 0 to 10 on the screen. **(5 marks)**