MOUNT KENYA UNIVERSITY
BIT 1102 – INTRODUCTION TO PROGRAMMING & ALGORITHM
CAT 1

February, 2019

QUESTION ONE

a) Describe the three control structures that make up a computer program   [6 Marks]

b) Explain the qualities of a good program   [4 Marks]

c) KK Security Ltd. Pays its guards wages on weekly basis. The guards works on an eight

   hours per day shift at a rate of Ksh. 320 per day, 5 days a week. Hours worked on Saturday

   are paid at 15%, while Sunday hours are paid at 20% more than the normal week day rate.

   Required

   Derive the algorithm to automate the wages calculation at the end of each week and

   represent it using a **Flow chart** and **Pseudo-code.**   [10 Marks]

QUESTION TWO

a) Differentiate between Pseudo-code and Flow-chart   [4 Marks]

b) A program is required to accept the length and width of a square and display its area.

   Derive an Algorithm for the program and represent using Pseudo code   [8 Marks]

c) Explain the main objectives / goals of Programming   [8 Marks]

QUESTION THREE

a) Explain the characteristics of a good algorithm   [6 Marks]

b) Explain why you would choose to use the high level programming languages over the

   other types of programming languages   [6 Marks]

c) Using a program example explain the structure of a C program   [8 Marks]