DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY

University Examinations 2014/2015

SPECIAL/SUPPLEMENTARY EXAMINATION FOR THE DEGREE OF
BACHELOR OF SCIENCE IN CRIMINOLOGY & SECURITY MANAGEMENT

BSM 2419:   DATA MINING

DATE: 14TH MAY 2015   **TIME: 10.00AM-12.00PM**

INSTRUCTIONS: ANSWER QUESTION 1 AND ANY OTHER TWO.

QUESTION 1: (30 MARKS)

  a) Discuss the tools for data preparation in data mining process.   **[6 marks]**

  b) Using example explain the benefits of standardizing criminal data. **[6 marks]**

  c) Explain how link analysis works in data mining investigations.   **[3 marks]**

  d) Describe the role of link analysis in data mining investigations.   **[4 marks]**

  e) Describe the role of using link analysis networks in data mining investigations.

                                                                          [6 marks]

  f) Discuss the importance of using database system for managing crime.
                                                                          [5 marks]

QUESTION 2: (20 MARKS)

  a) Using a Case Study discuss how to fighting wireless fraud with link analysis.
                                                                          [6 marks]
  b) Describe types of link analysis technique of data mining investigations.

                                                                          [5 marks]

  c) Using a Case Study discuss how to combat drug trafficking in Kenya-cost with

       link analysis.   **[5 marks]**

  d) Describe the link analysis applications in data mining process.   **[4 marks]**

QUESTION 3: (20 MARKS)

a) Discuss the link analysis limitations in data mining investigations. **[4 marks]**

b) Describe how text mining works in data mining investigations. **[4 marks]**

c) Describe text mining applications in data mining investigations. **[4 marks]**

d) Using a Case Study discuss the searching for clues in aviation crashes investigation. **[4 marks]**

e) Using a Case Study discuss clustering news stories in data mining. **[4 marks]**

QUESTION 4: (20 MARKS)

a) Discuss the text mining threats in today's investigations. **[4 marks]**

b) Discuss the role of neural networks in data mining investigations. **[4 marks]**

c) Explain how a neural network in data mining investigation. **[4 marks]**

d) Describe the rules for predicting crime in data mining investigation.

[4 marks]

e) Using a Case Study discuss how to detecting suspicious government financial transactions: **[4 marks]**

QUESTION 5: (20 MARKS)

a) Describe machine-learning criminal patterns technique in data mining.

[4 marks]

b) Discuss the process of insurance crimes detection in today's world of data mining.

[4 marks]

c) Discuss four data mining methodology for detecting crimes. **[4 marks]**

d) Describe ensemble mechanisms for crime detection. **[4 marks]**

e) Discuss the reason why conventional data mining is described as finding needles in moving haystacks". **[4 marks]**