MURANG'A UNIVERSITY OF TECHNOLOGY

SCHOOL OF COMPUTING AND INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

UNIVERSITY POSTGRADUATE EXAMINATION

2018/2019 ACADEMIC YEAR

FIRST YEAR **FIRST** SEMESTER EXAMINATION FOR MASTER IN INFORMATION TECHNOLOGY

SIT 601– ANALYSIS FOR BUSINESS INTELLIGENCE

DURATION: 3 HOURS

DATE: 16/4/2019

TIME: 9-12 P.M.

Instructions to candidates:

1. Answer **Any Four** questions.
2. Mobile phones are not allowed in the examination room.
3. You are not allowed to write on this examination question paper.

QUESTION ONE (25 MARKS)

a) Discuss how information and knowledge are the backbone of the decision making process, use Data-Action Cycle to explain further. (6 marks)

b) Justify why data mining is classified under prediction analytics. (4 marks)

c) What information provided by the descriptive analytics employed at magpie sensing? (4 marks)

d) Identify any for business environmental factors that creates pressure on organization and explain how various ways affect it. (5 marks)

e) Differentiate between OLTP and OLAP, explain how they have enhanced the business processing. (4 marks)

QUESTION TWO (25 MARKS)

a) Using an aid of a diagram explain the components of business pressure responses support model on improving business processes and decision making. (6 marks)

b) According to Gorry and Scott Morton Classical framework, explain proposed structuredness degree and types of controls for decision support framework. (4 marks)

c) Is management the same as decision making? Discuss. (4 marks)

d) Prescriptive analysis is considered to be a step further ahead of prediction analytics and substantially different from it. Discuss why, provide any example of each and outline their difference. (5 marks)

f) Critic how Simon's four phases of decision making has impacted on web. (4 marks)

QUESTION THREE (25 MARKS)

a) Some "error" in decision making can be attributed to the notion of decision making from the gut. Explain what is meant by this and how such error can happen. (5 marks)

b) Highlight similarities and differences between Simon's and Kepner-tregoe methods. (6 marks)

c) "The more data the better" assess the needs to have quality data to feed decision-making system. (4 marks)

d) What are the structural differences between two-tier and three-tier architectures? Which one of the two models is more suitable for analytical operations performed on a very data set?

(6 marks)

e) Discuss the security concerns involved in building a data warehouse   (4 marks)

QUESTION FOUR (25 MARKS)

a) Discuss the distinct features of OLPT vs OLAP.   (5 marks)

b) Discuss how data warehouse performing better than traditional heterogeneous DBMS and highlight their differences.   (10 marks)

c) Why do we need data preprocessing? What are main task and relevant techniques used in data preprocessing.   (10 marks)

QUESTION FIVE (25 MARKS)

a) Discuss social Network analysis? Which type of Social Network are relevant to business.

(5 marks)

b) Highlight the role of natural language processing in text mining. Discuss the capabilities and limitation of NLP in the context of mining.   (8 marks)

c) Explain the challenges that one should be mindful of when considering implementation of big data analytics.   (6 marks)

d) Discuss the relationship among data mining, text mining and sentiments analysis.

(6 marks)