



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS

**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELORS IN BUSINESS
INFORMATION SYSTEMS**

3RD YEAR 2ND SEMESTER 2016/2017 ACADEMIC YEAR

MAIN CAMPUS

COURSE CODE: IIS 3322

COURSE TITLE: BUSINESS INTELLIGENCE AND DATA WAREHOUSING

EXAM VENUE: STREAM: BIS

DATE: EXAM SESSION:

TIME: 2 HOURS

INSTRUCTIONS:

- a) Answer Question 1 (Compulsory) and ANY other two questions
- b) Candidates are advised not to write on the question paper
- c) Candidates must hand in their answer booklets to the invigilator while in the examination room

QUESTION 1 (30 MARKS)

- a) Define the term "Business intelligence". (2 marks)
- b) Identify the four major components of Business intelligence (4 marks)
- c) Explain clearly data warehousing. (2 marks)
- d) What are the three essential features of a data warehouse? (3 marks)
- e) Clearly define what a decision support system (DSS) is. (2 marks)
- f) Explain the role of data warehouses in decision support (3 marks)
- g) Explain data integration and the extraction, transformation, and load (ETL) processes (6 marks)
- h) What is business reporting? (2 marks)
- i) Explain what data mining is all about. (2 marks)
- j) Explain the two categories of data mining tasks. (4 marks)

QUESTION 2 (20 MARKS)

Using a clearly labeled diagram describe how organizations survive and even excel in today's turbulent business environment (solving problems and exploiting opportunities)

QUESTION 3 (20 MARKS)

- a) Discuss the steps involved in data preprocessing for data mining (10 marks)
- b) State and explain different methods and algorithms used in data mining (10 marks)

QUESTION 4 (20 MARKS)

- a) Explain the five essential architectural properties of a data warehouse system. (10 marks)
- b) Enumerate and explain the five main components of business intelligence. (10 marks)

QUESTION 5 (20 MARKS)

- a) Many people treat data mining as a synonym for another popularly used term, knowledge discovery from data (KDD).
 - i) Using a diagram, illustrate the knowledge discovery process. (7 marks)

- ii) Explain clearly what happens at each stage. (7 marks)
- b) Explain the three major approaches of implementing OLAP servers. (6 marks)