



FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
SCHOOL OF INFORMATION AND COMMUNICATION TECHNOLOGY
DEPARTMENT OF INFORMATION AND MEDIA TECHNOLOGY

FIRST SEMESTER 2014/2015 EXAMINATION

COURSE CODE: IMT 412
COURSE TITLE: DATA MINING II
CREDIT UNITS: 2
TIME ALLOWED: 2 hours
COURSE LECTURER(S): I. O. ALABI
NUMBER OF QUESTIONS: 4
NUMBER OF PAGES: 2 (INCLUDING THIS PAGE)

INSTRUCTIONS

- Answer all questions
- Do **not** use red pen
- Please use a clear handwriting
- This exam is closed book, closed notes, closed laptop and closed cell phone
- Please use non-programmable calculators only



1. a) Explain briefly the following:

- i) Supervised learning
- ii) Data mining techniques
- iii) Predictive modeling
- iv) Confusion matrix
- v) market-basket transactions (2 marks each).

b) What are the pitfalls to avoid in a Decision tree induction? (5 marks).

2. a) Explain the following, use sketches as necessary:

- i) Binary attributes
- ii) Nominal attributes
- iii) Ordinal attributes
- iv) Continuous attributes
- v) Class label (2 marks each).

b) Sketch a lattice for all possible item-sets $I = \{a, b, c, d, e\}$. (5 marks).

3. a) Briefly explain how clustering functions in an information retrieval system. (5 marks).

b) Discuss five areas of security threat in data mining. (10 marks)

4. a) State the association rule and its metrics. (10 marks)

b) What is the essence of association analysis? (5 marks)