



**NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**FACULTY OF COMMUNICATION AND INFORMATION SCIENCE**  
**DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE**  
**INFORMATION STORAGE AND RETRIEVAL**

**ILI 2110**

**First Semester Examination Paper**

**November 2016**

This examination paper consists of 2 pages

**Time Allowed:** 3 hours  
**Total Marks:** 100  
**Special Requirements:** None  
**Examiner's Name:** E. Mupaikwa

**INSTRUCTIONS**

1. Answer any four (4) questions
2. Each question carries 25 marks
3. Importance is attached to accuracy, clarity of expression and legible handwriting

**MARK ALLOCATION**

<b>QUESTION</b>	<b>MARKS</b>
1.	25
2.	25
3.	25
4.	25
5.	25
6.	25
<b>TOTAL</b>	

- 1.1 With the aid of examples, examine the phases of the information life cycle. [15 marks]
- 1.2 Analyze the characteristics of different types of information. [10 marks]
- 2.1 With the aid of annotated diagram, discuss the information retrieval process. [15 marks]
- 2.2 With respect to information retrieval, evaluate the following terms:
- 2.2.1 Precision [5 marks]
- 2.2.2 Recall [5 marks]
3. Examine the major functional components of information storage and retrieval systems. [25 marks]
- 4.1 Justify the need for evaluating information storage and retrieval systems. [10 marks]
- 4.2 Discuss the evaluation criteria for information storage and retrieval systems. [15 marks]
- 5.1 With the aid of examples, analyze the roles of different components of a text streaming search system. [15 marks]
- 5.2 Critique the following information retrieval algorithms:
- 5.2.1 Knuth-Pratt-Morris algorithm [5 marks]
- 5.2.2 Boyer-Moore algorithm [5 marks]
- 6.1 Justify the information visualization process [5 marks]
- 6.2 Discuss the following information retrieval models:
- 6.2.1 Boolean [5 marks]
- 6.2.2 Vector [5 marks]
- 6.2.3 Probabilistic [5 marks]
- 6.2.4 Inference [5 marks]