"Investing in Africa's Future"

COLLEGE OF BUSINESS, PEACE, LEADERSHIP AND GOVERNANCE

CSC 211 OPERATING SYSTEMS

END OF FIRST SEMESTER EXAMINATIONS

APRIL/MAY 2017

LECTURER: MR A.C MUZENDA

DURATION: 3 HOURS

INSTRUCTIONS

Answer all Questions in Section A and **any three questions from Section B**
Total possible mark is 100

Start **each** question on a new page in your answer Booklet.

The marks allocated to **each** question are shown at the end of the section.

SECTION A

QUESTION 1

    a. Give any five functions of an operating system.   [5]

    b. Discuss the following terms with reference to operating systems;

        i. Response time   [2]

        ii. Quantum   [2]

        iii. Context switching   [2]

        iv. Plug and play   [3]

        v. Virtual storage   [2]

    c. Compare and contrast multiprocessing and multiprogramming.   [4]

    d. List and explain the three ways in which the operating systems deal with deadlocks.   [15]

    e. What factors encourage software piracy?   [5]

SECTION B

Answer any three questions

QUESTION 2

    a. Give a brief discussion of segmentation in memory management.   [10]

    b. State and explain the advantages and disadvantages of using open source software.   [10]

QUESTION 3

    a. With the aid of a flow chart, explain fully the use of a TRANSLATION LOOKASIDE BUFFER.   [10]

    b. Explain the purpose of the Banker's algorithm and how it works.   [10]

QUESTION 4

    a. Illustrate and explain the four necessary conditions for a deadlock to occur. [10]

    b. Explain the following scheduling algorithms with the aid of examples;

        i. First Come First Serve scheduling algorithm   [5]

        ii. Priority scheduling algorithm.   [5]

QUESTION 5

    a. With the aid of a diagram, explain the layered structure of an operating system.

                                         [12]

    b. Name and explain the purpose of any four UNIX commands.   **[8]**

THE END