

UGANDA MARTYRS UNIVERSITY
NKOZI

UNIVERSITY EXAMINATIONS
FACULTY OF SCIENCE

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION SYSTEMS

END OF SEMESTER ONE FINAL ASESMENT
SEMESTER I, 2015/16

SUPPLEMENTARY EXAMINATIONS FOR DIPLOMA IN COMPUTER
SCIENCE

Introduction to Operating Systems
DIPs 1105

DATE: 25th July 2016

TIME

DURATION: 3HRS

Instructions:

1. Carefully read through ALL the questions before attempting
 2. Answer any other **FOUR** questions
 3. No **names** should be written anywhere on the examination book.
 4. Ensure that your **Reg number** is indicated on all pages of the examination answer booklet.
 5. Ensure your work is **clear and readable**. Untidy work shall be penalized
 6. Any type of examination Malpractice will lead to automatic disqualification
 7. Do not write anything on the questions paper.
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QUESTION ONE

- a) Define and explain the following terms
 - i) operating systems
 - ii) application software @4marks
- b) Explain how operating system is able to perform the following functions
 - i) Memory management
 - ii) File management
 - iii) Device management
 - iv) Security and Recovery @4marks

QUESTION TWO

- a) Explain with a diagram the structure of an operating System 8marks
- b) What do you understand by the term back up and explain the different ways of back up 7marks
- c) Explain the process of file management in OS 5 marks
- d) Explain the process of recovery in OS 5 marks

QUESTION THREE

- a) Explain how processes are loaded and swapped in memory management. 6marks
- b) Memory management is needed in OS. Explain this statement 4 marks
- c) Differentiate between the following terms
 - i) Multiprogramming and monoprograming
 - ii) Swapping and non swapping
 - iii) Paging and fragmentation.
 - iv) Process and program @4marks

QUESTION FOUR

Explain the different types of the operating systems below

- i) Distributed OS
- ii) Network OS
- iii) Real time OS
- iv) Batch OS
- v) Time sharing operating system @5marks

QUESTION FIVE

- a) Difference between the kernel of Windows and UNIX OS 10marks
- b) Why would you as an IT student recommended windows OS. 8 marks
- c) Explain the history of Linux and its advantages 7 marks

QUESTION SIX

a) Explain with illustration the following term under memory management

- i) Dynamic loading
- ii) Segmentation
- iii) Demand paging
- iv) Virtual Memory
- v) Scheduling queues
- vi) Process scheduling

@3 marks

b) Explain how memory is allocated in memory management of OS.

7 marks