

**W1-2-60-1-6**

## JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY

**UNIVERSITY EXAMINATIONS 2016/2017**

**YEAR 2 EXAMINATIONS FOR THE DIPLOMA IN INFORMATION TECHNOLOGY**

**DIT 0405: OPERATING SYSTEMS I**

**DATE: JULY 2017 TIME: 1.5 HOURS**

INSTRUCTIONS: ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

QUESTION ONE

a) Define the following; (8 marks)

i) Operating system

ii) Multi programming

iii) Multi tasking

iv) Scheduling

b) What are the primary differences between Network and distributed operating systems (10 marks)

c) What is the relationship between operating systems and computer hardware (2 marks)

QUESTION TWO

a) Distinguish between non-preemptive and preemptive algorithms

(4 marks)

b) Using a well labeled diagram illustrate the process life cycle (12 marks)

c) State at least four process scheduling algorithms (4 marks)

QUESTION THREE

a) What is a scheduling program (2 marks)

b) What criteria affect the schedules performance (10 marks)

c) When a program is loaded to memory and it becomes a process, it can be divided into four sections. Briefly explain them (8 marks)

QUESTION FOUR

a) State and explain five properties of a good operating system (10 marks)

b) State four types of operating systems commonly used on mobile phones (4 marks)

c) Operating systems provide fundamental services to process. list and explain three (6 marks)