TECHNICAL UNIVERISTY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY (DICT 14S/S-FT)

ECS 2106: PRINCIPLES OF OPERATIGN SYSTEMS

END OF SEMESTER EXAMINATION
SERIES: APRIL 2015
TIME: 2 HOURS

Instructions to Candidates:
You should have the following for this examination
- *Answer Booklet*

This paper consists of **FIVE** questions.
Attempt question **ONE (Compulsory)** and any other **TWO** questions
Maximum marks for each part of a question are as shown

This paper consists of **TWO** printed pages

Question One (Compulsory)

a) State THREE basic goals of an operating system software **(3 marks)**

b) Describe a computer's operating system startup process **(6 marks)**

c) Describe the parts of a process in memory **(10 marks)**

d) By use of a diagram, describe the states of an executing process **(10 marks)**

e) Define an operating system process **(1 mark)**

Question Two

a) Describe the causes of deadlocks and the methods used to handle them **(10 marks)**

b) State FIVE services of an operating system **(5 marks)**

Question Three

a) Define the term "Memory Management Unit" **(3 marks)**

b) Describe the benefits of paging in memory management **(6 marks)**

c) Explain any THREE benefits of virtual memory **(6 marks)**

Question Four

a) Define the term "Kernel" **(2 marks)**

b) Describe THREE forms of file structure **(6 marks)**

c) Describe TWO file access methods **(4 marks)**

d) Distinguish between a "directory" and a "file" **(3 marks)**

Question Five

a) Describe THREE file allocation methods **(6 marks)**

b) Explain the organization of the computer system components **(9 marks)**