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KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATION, 2018/2019 ACADEMIC YEAR
CERTIFICATE IN BUSINESS INFORMATION TECHNOLOGY

CIT 1004- OPERATING SYSTEMS

Date: 14th August, 2018
Time: 11.00Am- 1.00Pm

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

QUESTION ONE (30 MARKS)

- a) The operating system is considered a resource manager. Explain four resources that are managed by the operating system (5 Marks)
- b) One of the principle objectives of operating systems is to create virtual machine. Elaborate what virtual machine means and two advantages of the same (4 Marks)
- c) Define the following terms; (5 Marks)
- i) Multiprocessing
 - ii) Interrupt
 - iii) Cache Memory
 - iv) Kernal
 - v) Multiprogramming
- d) Explain why memory management is necessary (4 Marks)
- e) Differentiate long term schedulers and medium term schedulers (4 Marks)
- f) Briefly discuss the characteristics of operating systems (8 Marks)

QUESTION TWO (20 MARKS)

- a) Differentiate application software and system software with examples (4Marks)
- b) Define device drivers and outline their functions (4 Marks)
- c) You are the I.T manager of a small growing enterprise. Advice the organization on the best type of operating system to install in order to facilitate efficiency and effectiveness and give reasons for selecting that type (8 Marks)
- d) Differentiate between deadlock and deadlock prevention (4 Marks)

QUESTION THREE (20 MARKS)

- a) Expound on the common services that operating systems provide to users (6 Marks)
- b) Elaborate on the reasons why distributed systems are becoming popular. (8 Marks)
- c) Define scheduling why it is necessary during execution of processes (6 Marks)

QUESTION FOUR (20 MARKS)

- a) Briefly explain the conditions that are necessary for deadlock to occur (8 Marks)
- b) Differentiate between multiprocessing and multiprogramming. Use an example (4 Marks)
- c) An Operating System provides services to both the users and to the programs. Elaborate (4 Marks)
- d) Distributed systems are more scalable and reliable than other different systems. Support this statement (4 Marks)

QUESTION FIVE (20 MARKS)

- a) Compare between long term schedulers, short term scheduler and medium term scheduler (8 Marks)
- b) Explain five properties of an operating system (10 Marks)
- c) Differentiate between a program and process (2 Marks)