

**GARISSA UNIVERSITY**

**SCHOOL OF PURE AND APPLIED SCIENCES**

**END OF SEMESTER EXAMINAION FOR DIPLOMA OF INFORMATION TEHNOLOGY**

 **UNIT CODE: CIT 003 TITLE: OPERATING SYSTEMS**

**DATE: TIME: 2 HOURS**

**INSTRUCTION TO CANDIDATES**

1. The paper consists of two sections A and B.
2. Answer ALL the questions in section A (compulsory).
3. Answer any two Questions from section B.
4. Marks allocated are shown at the end of each question.
5. Write your answers in the answer sheet booklet provided.

**SECTION A :( 30 marks)**

**QUESTION ONE**

1. Define the following terms.
2. Operating systems (2 mark)
3. Long term scheduler **(2 mark)**
4. Short term scheduler (**2 mark)**
5. System multi-threading (**2 mark)**
6. Dynamic loading (**2 mark)**
7. Discuss FIVE important functions of operating systems (10mks)
8. Explain FIVE types of operating system which are most commonly used today (10mks)

**SECTION B: (40 marks)**

**QUESTION TWO**

1. Describe the following process scheduling algorithms
2. First Come First Serve (FCFS) Scheduling ( 2 marks)
3. Shortest-Job-First (SJF) Scheduling ( 2 marks)
4. Priority Scheduling ( 2 marks)
5. Multilevel Queue Scheduling ( 2 marks)
6. Round Robin (RR) Scheduling
7. Explain common services provided by an operating system (6 marks)
8. Explain THREE characteristics of an operating system ( 6 marks)

**QUESTION THREE**

1. Explain the difference between graphical user interface and character user interface operating system ( 4 marks)
2. Briefly describe the following types of Operating System
3. Single program operating system
4. Multi-tasking operating system
5. Single user operating system
6. Multi user operating system ( 8 marks)
7. State and Explain FOUR Components of a computer system ( 8 marks)

**QUESTION FOUR**

1. Outline the Functions of an operating system? (7 marks)
2. State Factors to consider when choosing an operating system (5 marks)
3. State Four advantages of using Windows Operating system in an organization (4 marks)
4. Explain the difference between complex system and simple system ( 4 marks)

**QUESTION FIVE**

1. Explain FIVE states of operating system processes (10 marks)
2. Explain Five difference between long term scheduler and medium-term scheduler (10 marks)