ELIZADE UNIVERSITY

ILARA-MOKIN

FACULTY: BASIC AND APPLIED SCIENCES
DEPARTMENT: MATHEMATICS AND COMPUTER SCIENCE
1st SEMESTER EXAMINATION
2020/ 2021 ACADEMIC SESSION

COURSE CODE: CSC 203

COURSE TITLE: Operating System

COURSE LEADER: Dr. Bukola Onyekwelu

DURATION: 2 Hours

HOD's SIGNATURE

INSTRUCTION:

Candidates should answer any **FOUR** Questions.

Students are warned that possession of any unauthorized materials in an examination is a serious assessment offence

Students are permitted to use ONLY a scientific calculator.

1a. What are the goals of an Operating System?

b. Operating systems can be classified/categorized based on two (2) different conditions and perspectives. List them, and give the operating systems under each category.

c. Explain the Components of the Operating System

2a. Define the following:
    i.   A Process
    ii. A Process State

b. Draw a diagram showing the five (5) process states. Describe each of the states.

c. Explain the information contained in the Process Control Block

2a. There are six (6) popular Process Scheduling Algorithms. List them.

b. Given the table below:

Process	Arrival Time	Execute Time
P0	0	5
P1	1	3
P2	2	2
P3	3	4

With Quantum= 2, calculate the Average Waiting Time for three(3) of the algorithms. Compare your results and recommend which of them is best for this set of processes.

3a. Define the following:
    i.   A Process
    ii.   A Process State

b. Draw a diagram showing the five(5) process states. Describe each of the states.

c. List the pieces of Information contained in the Process Control Block.

4a. Define Memory Management

b. Describe the three (3) types of addresses used in a program before and after memory is allocated.

c. Explain the two types of fragmentation, and state how each can be reduced

5a. What is a file?

b. Explain the three file access mechanisms

c. Describe the attributes of a file

6a. Describe three ways the OS authenticates users.

b. What are System Threats? List three (3) well-known System Threats.

c. Explain the four (4) levels of security measures in computing environment