



NATIONAL OPEN UNIVERSITY OF NIGERIA
PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI-ABUJA
FACULTY OF COMPUTING
DEPARTMENT OF COMPUTER SCIENCE
2025_2 EXAMINATIONS_

COURSE CODE: CIT832

COURSE TITLE: OPERATING SYSTEM CONCEPT AND NETWORKING MANAGEMENT

COURSE CREDIT: 3 UNITS

TIME ALLOWED: 3 HOURS

INSTRUCTION: ANSWER QUESTION 1 AND ANY OTHER THREE QUESTIONS

Question 1: 25mks

- i. What is Operating System? (5Mks)
- ii. Identify Three (3) Important reasons for studying Operating Systems (5Mks)
- iii. Identify Four (4) Operating System Structures (5Mks)
- iv. Identify with examples, the two broad classes of modern Operating Systems (5Mks)
- v. Identify at least, Four (4) characteristics of modern Operating Systems (5Mks)

Question 2: 15mks

- i. What is a Process (5Mks)
- ii. Differentiate between a Process and a Thread (5Mks)
- iii. Identify Five (5) Process states (5Mks)

Question 3: 15mks

- i. What is Deadlock? (5Mks)
- ii. List the Four (4) necessary and sufficient conditions for deadlock? (5Mks)
- iii. How is deadlock prevented? (5Mks)

Question 4: 15mks

- i. What is CPUScheduling? (5Mks)
- ii. Differentiate between Shortest Job First (SJF) and Shortest Remaining Time (SRT) scheduling algorithms (5Mks)
- iii. Identify Five (5) other process scheduling algorithms that you know (5Mks)

Question 5: 15mks

- i. Identify the Seven (7) layers of the ISO OSI reference model of a Network(5Mks)
- ii. How is the TCP/IP model of networks different from the ISO OSI reference model? (5Mks)
- iii. Identify at least Two (2) networking devices that operates at layer 1, layer 2, and layer 3 of the OSI model. (5Mks)

Question 6: 15mks

- i. What is Communication Protocol? (5Mks)
- ii. Identify the Protocols that operates at layer 3 and layer 4 of the OSI model (5Mks)
- iii. With example, differentiate between a connection oriented and connectionless service. (5Mks)