



NATIONAL OPEN UNIVERSITY OF NIGERIA
University Village, 91 Cadastral Zone, Nnamdi Azikwe Expressway, Jabi, Abuja
FACULTY OF SCIENCE
DEPARTMENT OF COMPUTER SCIENCE

CIT 723: OPERATING SYSTEM DESIGN AND PROGRAMMING

Instruction: Answer any five questions each question carries 14 marks **Time:** 2½ hours

1. (a) Define Operating System **(2½ marks)**
(b) Mention the service levels offered by operating systems in Controlling Computer resources. **(5 marks)**
(c) Enumerate briefly the importance of the Kernel Service as part of the support of the Operating System **(4 marks)**
(d) Write short note on Single-User operating system **(3½ marks)**
2. (a) Operating System is said to be a resource manager. List four hardware resources operating system effectively manages. **(2 marks)**
(b) List six functions of operating system as offered to computer system.
(c) Write short notes on Routing Information Protocol (RIP) **(6 marks)**
3. Describe the architecture of the Linux operating system enumerating its various components **(14 marks)**
4. List and discuss all the qualities of operating systems **(14 marks)**
5. (a) List five basic functions of an operating systems. **(5 marks)**
(b) Write briefly on the following basic services of operating systems:
(i) Input/output operations **(2 marks)**
(ii) Program Execution **(3 marks)**
(c) Write briefly on the following Windows NT Server Permissions: **(4 marks)**
(i) Read
(ii) Execute
(iii) Write
(iv) No Access
6. (a) State the seven layers of the OSI Reference Model from the top layer. **(7 marks)**
(b) Write short notes on the Application Layer of the OSI reference model and also state common functions at this layer **(7 marks)**
7. (a) What is Computer Security and what does it entail? **(3 mark)**
(b) Briefly enumerate the core areas of Computer Security. **(4½ marks)**
(c) The broad category of operating systems are essentially classified into two. Name them. **(2 marks)**
(d) Discuss briefly on Multi-User operating system. **(2½ marks)**
(e) What are network protocols? **(2 marks)**