



NATIONAL OPEN UNIVERSITY OF NIGERIA
14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS
MARCH/APRIL 2016 EXAMINATION

SCHOOL OF SCIENCE AND TECHNOLOGY

COURSE CODE: CIT723
COURSE TITLE: Operating System Design and Programming

Time: 2½ hours

Instruction: Answer any five questions each question carries 14 marks

1. (a) Briefly explain what you understand by network architecture? (3 marks)
(b) What are protocols? (2 marks)
(c) Enumerate the three points to keep in mind when you think about protocols in a network environment (6 marks)
(d) State any three benefits of networking. (3 marks)
- 2a) What do you understand by OSI reference model? Diagrammatically represent its layers. (5 marks)
b) Write short notes on any three of the OSI layers (9 marks)
- 3a) Briefly describe how protocols work. (7 marks)
b) Enumerate the steps taken by the protocols at both the sending and receiving computer. (4 marks)
c) State the file types that uses the following typical extensions: (3 marks)
 - i) .ps
 - ii) .mpg
 - iii) .dvi
 - iv) .jpg
 - v) .gif
 - vi) .pdf
- 4a) Write short notes on the following:
 - i) User Datagram Protocol (UDP) (4 marks)
 - ii) Internetwork Packet Exchange and Sequenced Packet Exchange (IPX/SPX) (5 marks)
 - iii) Media Access Protocols (5 marks)

5) Describe the architecture of the Linux operating system enumerating its various components (14 marks)

6a) Explain CRC error checking (3 marks)

b) Write short notes on the following:

i) Protocol Stacks (3 marks)

ii) The Binding Process (3 marks)

c) Describe Network Load Balancing (5 marks)

7a) What are network protocols? (2 marks)

b) Write short notes on the following describing and stating their functions:

i) Internet Protocol (IP) (6 marks)

ii) Transmission control protocol (TCP). (6 marks)