



ELIZADE UNIVERSITY

WURAOLA ADEOJO CLOSE

P.M.B 002, ILARA-MOKIN, ONDO STATE, NIGERIA.

TITLE OF EXAMINATION: B.Sc EXAMINATION

FACULTY: BASIC AND APPLIED SCIENCES

DEPARTMENT: MATHEMATICS & COMPUTER SCIENCE

SESSION: 2020/2021

SEMESTER: ALPHA

COURSE CODE: CYB 101

CREDIT UNIT: THREE (3)

COURSE TITLE: UNDERSTANDING COMPUTER NETWORKS

INSTRUCTION: ATTEMPT ANY THREE (3) QUESTIONS

TIME: 2.5 HOURS

1. (a) What is a computer network and how has it helped mankind? (5 marks)
(b) List five advantages of computer networks (5 marks)
(c) Explain exhaustively what a local area network (LAN) means and draw a diagram showing at least three more types of computer networks (5 marks)
(d) Explain network topologies and list its network design key parameters? (5 marks)
2. (a) List four benefits and four drawbacks of bus topology? (6 marks)
(b) Enumerate and **explain thoroughly** any five major components of a computer network? (10 marks)
(c) What are networking protocols? (4 marks)
3. (a) List the seven layers of the OSI model with details of network functions performed by each layer in summary? (7 marks)
(b) The TCP/IP model contains 4 layers only; this is in contrast to the OSI model and they only handle their expected tasks. Draw the connection diagram for TCP/IP - reference model and OSI model depicting the interconnection and basic protocols? (9 marks)
(c) List four advantages of TCP protocol? (4 marks)
4. (a) List five file transfer protocols and a brief insight into what they are used for specifically? (5 marks)

(b) Explain the Transmission Control Protocol (TCP) operations with full details?

(6 marks)

(c) List five (5) advantages of the Transmission Control Protocol as a critical protocol for information transfer?

(5 marks)

(d) Write a short note on the following?

(i) Hypertext transfer protocol (ii) Transport Layer Security

(4 marks)

5. (a) What is distributed computing?

(4 marks)

(b) There are three reasons that teams generally decide to implement distributed systems.

Explain these three benefits briefly?

(6 marks)

(c) What are the three main challenges you can encounter with a distributed system?

(6 marks)

(d) List four benefits of network management system?

(4 marks)