



UNIVERSITY EXAMINATIONS

2019/2020 ACADEMIC YEAR

**REGULAR EXAMINATION
FOR THE DEGREE OF
BACHELOR OF SCIENCE
IN
BIT, COMP, TED & EDS**

COURSE CODE: COMP 215

COURSE TITLE: FUNDAMENTALS OF NETWORKING

DATE: 11TH DECEMBER 2019

TIME: 2.00 P.M. – 5.00 P.M.

INSTRUCTIONS TO CANDIDATES

- SEE INSIDE

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BIT, COMP, TED & EDS
DECEMBER 2019, FIRST SEMESTER MAIN EXAM
COMP 215: FUNDAMENTALS OF NETWORKING

INSTRUCTIONS: ANSWER ALL QUESTIONS IN SECTION A AND ANY OTHER THREE IN SECTION B

SECTION A: ANSWER ALL QUESTIONS [COMPULSORY]

QUESTION ONE (12 MARKS)

- a) Explain the difference between the following terms as used in networking technology
 - i. Packet Switching and Circuit Switching (2 Marks)
 - ii. DHCP and DNS (2 Marks)
 - iii. MAC address table and IP address table (2 Marks)
- b) Explain THREE factors that should be taken into consideration when choosing a data transmission medium for a computer network (6 Marks)

QUESTION TWO (12 Marks)

- a) Define the term 'Network protocol' (2 marks)
- b) Explain how the Internetwork protocol suite operates (6 Marks)
- c) Explain FOUR main benefits of Extranets to a University (4 Marks)

SECTION B: ANSWER ANY THREE QUESTIONS

QUESTION THREE (12 Marks)

- a) Using appropriate illustrations explain the characteristics of each of the following types of network architectures highlighting their advantages and disadvantages
 - i. Peer-to-Peer (6 Marks)
 - ii. Client/Server (6 Marks)

QUESTION FOUR (12 Marks)

- a) Describe how the "CSMA/CD" network protocols operates (6 Marks)
- b) The University of Eldoret intends to improve the performance of its LAN. Discuss the specific areas to be addressed in order to achieve this objective (6 Marks)

QUESTION FIVE (12 Marks)

- a) Define the term Default route (4 Marks)
- b) State and explain the four parameters necessary to be configured for the computer to connect to the internet (8 Marks)

QUESTION SIX (12 Marks)

- a) Explain the functions of the following networking devices clearly indicating the layer of the OSI model in which they operate (6 Marks)
- i. Switch
 - ii. Router
 - iii. Repeater
- b) Discuss the layers of the TCP/IP model clearly showing the functions and protocols that operate in each layer (6 Marks)

QUESTION SEVEN (12 Marks)

Assume you have been appointed as a Network security consultant by the University of Eldoret.

- i. Describe THREE potential attacks originating from the internet that you will advise the University to be aware of (6 Marks)
- ii. Describe the measures you would advise the University to take to ensure that their data/information are protected from the above mentioned threats (6 Marks)

50-5
110



University of
Eldoret

flame of knowledge and innovation

UNIVERSITY EXAMINATIONS

2021/2022 ACADEMIC YEAR

REGULAR EXAMINATION
FOR THE DEGREE OF
BACHELOR OF SCIENCE
IN
COMPUTER SCIENCE;
INFORMATION TECHNOLOGY

COURSE CODE:

COMP 215

COURSE TITLE:

FUNDAMENTALS OF
NETWORKING

DATE: 8TH DECEMBER, 2021

TIME: 12.00 NOON - 3.00 PM

INSTRUCTIONS TO CANDIDATES

- SEE INSIDE.

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UNIVERSITY OF ELDORET

SCHOOL OF SCIENCES

UNIVERSITY EXAMINATIONS

2020/2021 ACADEMIC YEAR, NOVEMBER 2021

SECOND YEAR FIRST SEMESTER EXAMINATION FOR DEGREE OF BACHELOR
OF SCIENCE IN COMPUTER SCIENCE/ INFORMATION TECHNOLOGY

COURSE CODE: COMP 215

COURSE TITLE: FUNDAMENTALS OF NETWORKING

INSTRUCTION TO CANDIDATES

Answer **ALL** questions from section A and any **THREE** from section B.

Duration of the examination: 3 hours
=====

SECTION A (31 marks): (Two questions, one carrying 15 marks and the other 16 marks)

ANSWER ALL QUESTIONS IN THIS SECTION

Question 1

a) Define the following terminologies as used in networking:

- i) De jure standards
- ii) Line Configuration
- iii) Logical topology
- iv) Timeliness
- v) Session initiation

vi) Socket. (6 marks)

b) Discuss how address classes are managed in IPv4. (5 marks)

c) What is network? Explain the various type of networks. (5 marks)

Question 2

- Generic TLDs.
- country-code
Open source
infrastructure

- a) List and explain the top-level domains currently in use. (5 marks)
- b) Discuss how transmission control protocol(TCP)/internet protocol(IP) operates. (5 marks)
- c) To be considered effective and efficient a network must meet a number of criteria. Explain these criteria. (5 marks)

SECTION B (39 marks) (Five questions each carrying 13 marks)

ANSWER ANY THREE QUESTIONS

Question 3

- a) Discuss the various factors considered while choosing a type of network topology to be used. (5 marks)
- b) State the various standards organizations and explain their defined roles. (5 marks)
- c) Write short notes on subnet mask. (3 marks)

Question 4

- a) What is the difference between ISO and OSI? Explain the layers in OSI model. (6 marks)
- b) State and explain the steps performed in configuring the IP addresses. (5 marks)
- c) Discuss briefly the different transmission modes. (2 marks)

Question 5

- * a) Discuss the phases involved in circuit switching. (5 marks)
- b) What is a network topology? Explain types of network topologies. (5 marks)
- c) List and discuss briefly the formal standardization process stages. (3 marks)

the type of network topology is a...

Question 6

- a) Explain the various roles performed at the session layer. (5 marks)
- b) Discuss the various devices used in networking and state the layers in which they operate.
(5 marks)
- c) Explain briefly how internetworks operates. (3 marks)

Question 7

- a) State and explain the reasons that might lead an organization to install a wireless network in their premises. (5 marks)
- b) Discuss in detail with the help of a sketch on how packet switching operates. (5 marks)
- c) Explain the role of ipconfig and ping in networking. (3 marks)

COMP 215: Fundamentals of Networking

CAT 1

Date: 3/11/21

Attempt all questions

1. Discuss extensively the role of Transport layer in OSI model (5 marks).
2. Explain the factors considered in choosing the network topology. (5 marks)
3. What is encapsulation? Explain how this process is carried out in sending a message. (5 marks)
4. Explain the reason as to why network is important to an organization. (5 marks)
5. The performance of a network depends on a number of factors. Explain these factors. (5 marks)
6. What is a standard? Explain the various largest and important standard organizations. (5 marks)

* kules kuravula
* sheep - grass hopper

A - appli
P - present
S - session
T - transport
D
P

150
A

provides a
model of crypt
not makes it
possible to work
regardless of individual
manufacture