



KABARAK UNIVERSITY

**UNIVERSITY EXAMINATIONS
NAKURU CAMPUS**

FIRST TRIMESTER, 2016/2017 ACADEMIC YEAR

**EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN
INFORMATION TECHNOLOGY**

INTE 441: ADVANCED NETWORK

STREAM: Y4S2

TIME: 11 – 1PM

EXAMINATION SESSION: DECEMBER

DATE: 5TH DEC, 2016

INSTRUCTIONS:

- a) Answer question one and any other two question
- b) Do not write on the question paper
- c) Clearly cite relevant recent examples

Question -1

[30Marks]

- a) Explain the following networking terms with examples.

- i. Subnet [2Marks]
- ii. Network Topology [2Marks]
- iii. Attenuation [2Marks]
- iv. Multiplexing [2Marks]
- v. IoT [2Marks]

As members of Kabarak University family, we purpose at all times and in all places, to set apart in one's heart, Jesus as Lord. (1 Peter 3:15)

b) List and explain three transmission modes used in data communication?
[6Marks]

c) Differentiate between TCP and UDP? [6Marks]

d) State giving examples the types of transmission media? [4Marks]

e) Distinguish between Pipes and FIFO? [4Marks]

Question -2: [20Marks]

a) Identify five roles and responsibilities of the transport layer of the OSI model?
[10Marks]

b) What two protocols are in the transport layer? [4marks]

c) List three applications that use TCP? [3marks]

d) List three categories of port numbers? [3marks]

Question-3: [20Marks]

a) State five reasons why we subnet networks? [10marks]

b) What two factors do we consider while subnetting? [4Marks]

c) What is the subnet mask address of the following Ips

a. 10.1.15.150/16 [2marks]

b. 172.16.0.90/24 [2marks]

c. 192.168.5.5/8 [2marks]

Question-4:

[20Marks]

- a) Discuss and three network management tools [6marks]
- b) Discuss three network security threats [6marks]
- c) Discuss the importance of networking in today daily routine tasks [8Marks]

Question -5:

[20Marks]

- a) Explain the concept of a deadlock and how it can be avoided? [10marks]
- b) Discuss three categories of file access permissions in Unix. [6marks]
- c) In Unix systems what command do we use to: [4marks]
 - i. Change file access permissions
 - ii. Display the user manual pages
 - iii. List files and directories
 - iv. Change ownership of files and directories