Mount Kenya University

UNIVERSITY EXAMINATION 2018/2019

SCHOOL OF COMPUTING AND INFORMATICS
DEPARTMENT OF INFORMATION TECHNOLOGY/ ENTERPRISE COMPUTING

CBIT 1/ CBIT 2/ CBIT 3 & CBIT 4
REGULAR

UNIT CODE: 1306 **UNIT TITLE: INTRODUCTION TO NETWORK DEVICES**

NAKURU CBD CAMPUS

DUE DATE: 7TH NOVEMBER 2019 **ASSIGNMENT 1**

INSTRUCTIONS: - ANSWER QUESTION ONE AND ANY OTHER TWO
- USE ILLUSTRATIONS WHERE NECESSARY

QUESTION ONE (20 Marks)

(a) Using a well labeled diagram, describe the TCP/IP (internet) model. (5 Marks)
(b) Define the term '*Gateway'* and suggest the main functions of a gate way in a computer network. (3 Marks)
(c) Describe OSI Model Devices. (3 Marks)
(d) Describe any **TWO** flavours of network interface cards. (4 Marks)
(e) Describe any **FIVE** security threats likely to be found in computer networks. (5 Marks)

QUESTION TWO (20 Marks)

(a) State **TWO** advantages of virtual private networks (VPNS) to an organization. (2 Marks)
(b) Differentiate between Static & Dynamic Routing. (5 Marks)
(c) Differentiate between connectionless and connection-oriented switching. (4 Marks)
(d) Highlight **FOUR** advantages of packet switching over circuit switching. (4 Marks)
(e) Describe any **TWO** emerging trends and issues in computer networks. (2 Marks)
(f)Describe the logical and operation of routing protocols. (3 Marks)

QUESTION THREE (20 Marks)

(a) Using a diagram for illustration, describe the elements of a wireless network. (7 Marks)
(b) Describe any **THREE** factors that should be considered when selecting network cabling. (3 Marks)
(c) Distinguish between centralized routing and distributed routing. (10 Marks)