



TECHNICAL UNIVERSITY OF MOMBASA

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INSTITUTE OF COMPUTING AND INFORMATICS

Select department

UNIVERSITY EXAMINATION FOR:

**BACHELOR OF TECHNOLOGY IN INFORMATION COMMUNICATION TECHNOLOGY  
(BTIT/SEPT 2018)**

**BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY (BTIT/SEPT 2018)**

Type unit code **CIT 4304 Systems and Network Administration:** Type unit name.

**END OF SEMESTER EXAMINATION**

**SERIES: NOVEMBER 2021**

**TIME :2 HOURS**

**DATE: Pick Date Nov 2021**

**Instructions to Candidates**

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **FIVE** questions. Attempt question ONE (Compulsory) and any other TWO questions.

**Do not write on the question paper.**

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**Question ONE**

- a) Explain the difference between the following terms:
  - i) Network Administration and System Administration
  - ii) System Administrator and Network Administrator
  - iii) Local Group and Global Group
  - iv) Authentication and Authorization (16 Marks)
- b) State any three tasks performed by network administrator of a large organization (3 Marks)
- c) State one professional certification necessary for network administration and one for system administration (2 Marks)
- d) Explain any three components to network analyser (6 Marks)
- e) Explain three reasons why intruders use sniffers (3 Marks)

**Question TWO**

- a) Explain the following:
  - i) Network analyser



TUM is ISO 9001:2015 Certified

- ii) Virtual Private Network
  - iii) Secure Shell (SSH)
  - iv) Secure Sockets Layer (SSL)
  - v) Client-Server model
  - vi) Peer to Peer model (14 marks)
- b) State two advantages of peer to peer model (2 Marks)

### Question THREE

- a) i) Explain the following term “Server Operating system”, stating any two suitable examples. (4 Marks)
- ii) Explain any three features of Server Operating system that makes it installed in computer server. (6 Marks)
- b) You are a system administrator of a large firm. State any three qualities of a good password that should be observed when creating accounts. (6 Marks)
- e) State any four functions of Administrative tools as used in Windows Server 2016 (4 Marks)

### Question FOUR

- a) Explain the following terms:
- i. Domain Controller
  - ii. Directory services
  - iii. User account
  - iv. Domains.
  - v. Workgroup
  - vi. Security Group
  - vii. Distribution groups (14 Marks)
- b) Explain any three benefits of Active Directory (6 Marks)

### Question FIVE

- a) Differentiate between “Computer Account” and “User Account” (4 Marks)
- b) Explain the importance of “Computer Name and Administrator Password” dialog box during Windows Server 2016/2019 Installation process (2 Marks)
- b) Servers play many roles in the client/server networking environment. Some provide network services that enable users to communicate or find other servers and resources in the network. As a *systems administrator*, explain the following types of servers:
- i) Application Servers
  - ii) FTP Servers
  - iii) DNS Servers
  - iv) Mail Servers
  - v) Proxy Servers
  - vi) Web Servers
  - vii) DHCP Servers (14 Marks)

