



(Knowledge for Development)

KIBABII UNIVERSITY

(KIBU)

**UNIVERSITY EXAMINATIONS
2020 /2021 ACADEMIC YEAR**

**SPECIAL/SUPPLEMENTARY EXAMINATIONS
YEAR TWO SEMESTER TWO EXAMINATIONS**

**FOR THE DIPLOMA
INFORMATION TECHNOLOGY**

COURSE CODE : DIT 078

COURSE TITLE : SYSTEMS ADMINISTRATION

DATE: 19/01/2022

TIME: 8.00 A.M. – 10.00 A.M.

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTIONS ONE AND ANY OTHER TWO.

QUESTION ONE [COMPULSORY] [24 MARKS]

- a. What is Systems Administration? [2 marks]
- b. Discuss the duties of a Systems Administrator. [8 marks]
- c. Explain the following server services. [6 marks]
 - i) DNS
 - ii) HTTP
 - iii) Proxy
- d. DHCP has **THREE** main components. Briefly define DHCP and describe each of its components. [8 marks]

QUESTION TWO [18 MARKS]

- a. Explain the difference between MAC Address and IP address. [2 marks]
- b. Explain the following terms as used in server maintenance. [6 marks]
 - i) Patches
 - ii) Upgrades
 - iii) Service packs
- c. Discuss the **TWO** major functions of active directory. [4 marks]
- d. Using dynamic host configuration protocol (DHCP). Explain **THREE** methods of allocating IP addresses. [6 marks]

QUESTION THREE [18 MARKS]

- a. As a Systems Administrator you are charged with the responsibilities of installing server operating system. However, before you make these installations, you have to consider hardware components. Discuss the following hardware components while outlining their importance before installation. [8 marks]
 - i) Memory
 - ii) Processor/CPU
 - iii) Network
 - iv) Storage
- b. What is proxy server? State **FOUR** types. [6 marks]
- c. Differentiate between a server computer and a client computer. [4 marks]

QUESTION FOUR [18 MARKS]

- a. Explain at least **four** messages defined by DHCP. [4 marks]
- b. User management is a System Administrator's task. Discuss what it involves. [8 marks]
- c. List any four server Operating Systems. [4 marks]
- d. Explain the important function of Transmission Control Protocol (TCP). [2 marks]

QUESTION FIVE [18 MARKS]

- a. Discuss the following server Administrative Domains. [8 marks]
 - i) Network Domain
 - ii) Database Domain
 - iii) Web Domain
 - iv) Operating System Domain
- b. What is a protocol? Give an example. [2 marks]
- c. Discuss any **FOUR** backup media employed in any organization today. [8 marks]