



**COLLEGE OF BUSINESS AND ECONOMICS
JUNE 2019 EXAMINATION**

DEPARTMENT OF APPLIED INFORMATION SYSTEMS

MODULE : **COMMUNICATION NETWORKS 3A**

CODE : **CMN03A1**

DATE : **1 JUNE 2019**

DURATION : **2 HOURS**

TIME : **830 AM**

TOTAL MARKS : **100**

EXAMINER : **Mr T MUSEBA**

EXTERNAL MODERATOR : **Mr E.MTSWENI**

NUMBER OF PAGES : **3 PAGES**

INSTRUCTIONS TO CANDIDATES:

- Read the questions carefully
- Answer all questions
- Number your answers clearly
- Write neatly and legibly
- Structure your answers by using appropriate headings and sub-headings
- The general University of Johannesburg policies, procedures and rules pertaining to written assessments apply to this assessment.

QUESTION ONE

- 1.1.** Discuss the challenges faced by Wireless Communications **[5]**
- 1.2.** What is Global System Mobile (GSM)? Discuss four (4) components of GSM **[5]**
- 1.3.** Discuss the rationale behind cellular systems **[5]**
- 1.4.** Discuss the advantages of Code Division Multiple Access (CDMA) over Frequency Division Multiplexing (FDMA) **[5]**

QUESTION TWO

- 2.1.** Discuss five (5) problems face by radio propagation **[5]**
- 2.2** What is Wireless Communication? Discuss the factors that led to the fast growth of wireless use **[5]**
- 2.3** Discuss the advantages of Evolution Data Optimzed over Wi-Fi **[5]**
- 2.4.** Discuss the advantages of radio waves in radio propagation **[5]**

QUESTION THREE

- 3.1.** What is system administration? Discuss the characteristics of a well maintained system **[5]**
- 3.2.** With the aid of examples, explain why Linux is a popular operating system **[5]**
- 3.3.** Describe the functions of the following Linux directories: **[5]**
- 3.4.** What is an Operating System? State and describe the two main parts of an Operating System **[5]**

QUESTION FOUR

- 4.1. Describe the five (5) clients of OpenSSH [5]
- 4.2. Describe five [5] Samba Utilities in Linux [5]
- 4.3. Discuss the reasons why Wireless Communication is so popular [5]
- 4.4 Discuss the disadvantages of Wireless Networks when compared to fixed Networks [5]

QUESTION FIVE

- 5.1. Consider a Network File Sharing System such as SSH. Discuss two reasons that motivate file sharing [5]
- 5.2 When partitioning a hard disk on a production system, it is recommended to have separate partitions for such directories as **/boot**, **/var** and **/home** (amongst others). Discuss why separate partitions for these directories are necessary [5]
- 5.3 Describe how OpenSSH works [5]
- 5.4 Discuss real world applications of Wireless and Mobile Communications [5]