

UGANDA MARTYRS UNIVERSITY NKOZI

UNIVERSITY EXAMINATION

Jan-Feb 2021

FACULTY OF SCIENCE

DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION SYSTEMS

THIRD YEAR END OF SEMESTER ONE FINAL ASSESSMENT

Emerging Trends in IT

DATE: Feb. 2021

DURATION: 5 Days

Instructions:

1. *Carefully read through ALL the questions before attempting*
2. **ANSWER all questions in this exam**
3. *Include all your work in a Zipped folder called your names*
4. *Send your exam to the official university eLearning platform (www.elearning.umu.ac.ug) before the specified date on the exam timetable and platform for this exam.*
5. *Any type of examination Malpractice/Plagiarism will lead to automatic disqualification*

QUESTION ONE

(Include illustrations and demonstrations where necessary to earn added advantage and clarity of your input)

- a) As a student of IT, computer science, science general or any evolving science discipline from Uganda Martyrs university in the 21st century of the global village during the pandemic era of Covid19, use two pages to propose any emerging tech basing on the following categories; (IoT, Data Science, Big Data, Artificial Intelligence, ICT4D) that can be used to detect, control the spread, prevent, vaccinate or treat corona virus in developing countries. (20 Marks)
- b) What are the most likely challenges that a proposed tech is to face during programming, design and implementation stages? (6 Marks)
- c) Suggest technical solutions to the above issues in question (b) above (4 Marks)
- d) What is the future of the proposed tech? (5 Marks)

QUESTION TWO

- a) By using screenshots, drop three social media accounts of yours by previewing the number of followers, likes, pages, groups and any unique feature that is deemed to be important in business operations (3 Marks)
- b) How can those accounts be used in the fight against Corona Virus in developing countries. (5 Marks)
- c) What are some of the challenges that are frequently face by social media users. (5 Marks)
- d) How can you put to use the above accounts in the value addition of business processes of any company, factory or organization of your choice? (5 Marks)
- e) What is the future of social media in Uganda? (5 Marks)
- f) Why would you advise a company from disassociating with social media? (2 Marks)
- g) In case a company is relying on social media in its business communication processes and operations, which advice would you give and recommendation if its (Social media) blocked by the state. (2 Marks)
- h) Which recommendation can best suit to use if the suggested solution in (g) above is out of reach? (3 Marks)

QUESTION THREE

- a) Use the case of Uganda Martyrs University to explain the meaning of big data. (2 Marks)
- b) Use Zoom or any other video recording tool of your choice supported by Windows operating system to record a five (5) minutes session explaining how **Map reduce and Hadoop** techniques can be used to manage Uganda Martyrs University data (15 Marks)
- c) What is the major advantage and challenge of using big data (3 Marks)

QUESTION FOUR

- a) Choose either Learning management system or Content Management system to develop a one paged system that can help a fresh graduate in starting a new IT career in East Africa. (15 Marks)