



MACHAKOS UNIVERSITY

University Examinations for 2018/2019

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

FIRST YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF SCIENCE (INFORMATION TECHNOLOGY)

SIT107: INTRODUCTION TO INFORMATION SYSTEMS

DATE: 26/7/2019

TIME: 11.00-1.00 PM

Instructions

This paper consists of FIVE Questions

*Answer **Question one** and other **two Questions** in this paper.*

QUESTION ONE (30 MARKS)

- a) Explain the term Total Cost of Ownership as applied to information systems (2 marks)
- b) Briefly explain how computer information systems are used in **any three** sectors of the economy (6 marks)
- c) Define the following terms as they are used in computer-based information systems
 - i. Database
 - ii. Database management system (2 marks)
- d) Name and explain **any four** characteristics of valuable information (4 marks)
- e) Differentiate between operating system software and application software (4 marks)
- f) Briefly explain the trend of information systems with regards to business use from the 1950's to date (6 marks)
- g) Explain the three stages that an organization undergoes in the business use of information systems (6 marks)

QUESTION TWO (20 MARKS)

- a) Define the terms key and primary key as used in records management (2 marks)
- b) With the aid of a diagram, explain the components that make up a computer-based information system (8 marks)
- c) With the aid of a diagram, name and explain the hierarchy of data as used in information systems (10 marks)

QUESTION THREE (20 MARKS)

- a) Briefly explain **any three** competitive strategies that can be used by a business to combat the various competitive forces that assail it. (6 marks)
- b) With the aid of a diagram, explain the concept of a business model as applied to a business organisation (8 marks)
- c) With the aid of a diagram, explain the concept of an organizations value chain (6 marks)

QUESTION FOUR (20 MARKS)

- a) Define the term “information system” (2 marks)
- b) With the aid of a diagram, differentiate between the following terms as applied to information systems; data, information and knowledge (5 marks)
- c) With the aid of a diagram, explain the four primary functions of a computer system (7 marks)
- d) Name and explain, giving an example of each, **any three** categories that Business information systems are classified as (6 marks)

QUESTION FIVE (20 MARKS)

- a) Briefly explain **any three** roles in the Enterprise Architecture team (6 marks)
- b) With the aid of a diagram, explain the concept of a Decision Support System (DSS) as used in a business environment (6 marks)
- c) With the aid of a diagram, explain the 3-tier Database-Application system architecture design (8 Marks)