



MACHAKOS UNIVERSITY

University Examinations for 2017/2018

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

FOURTH YEAR FIRST SEMESTER EXAMINATION FOR
BACHELOR OF SCIENCE (INFORMATION TECHNOLOGY)

SIT 105: INTRODUCTION TO COMPUTER HARDWARE

DATE: 5/12/2017

TIME: 2:00 – 4:00 PM

INSTRUCTIONS

Answer Question ONE and any other TWO Questions

1. a) Describe the function of the following buses in a standard computer system:
 - i Address bus
 - ii Data bus
 - iii Control bus (6 marks)
- b) i) Using a labeled block diagram describe the main components of a microprocessor (8 marks)
- ii) Explain the function of the following Units in a Microprocessor.
 - I) The Accumulator
 - II) Instruction register
 - III) The program counter (6 marks)
- c) i) Differentiate between RAM and ROM (2 marks)
- ii) Explain the primary function of BIOS (2 marks)
- d) Describe 3 fundamental data storage technologies (6 marks)

2. a) i) name and describe four types of point-and-draw devices (8 marks)
ii) Differentiate between a track pad and a mouse cursor. (2 marks)
- b) Explain the meanings of the following terms used in scanners' description.
- i Optical character recognition (OCR) (2 marks)
- ii Bar codes (2 marks)
- c) Name and explain three basic P.C printer technologies (6 marks)
3. a) Name and explain the function of each of the three main parts of a Microprocessor /CPU (6 marks)
- b) What is a Register in a Microprocessor (4 marks)
- c) Name and describe one function of each of the five registers in a microprocessor (10 marks)
4. a) Describe the Four major steps a machine cycle follows to carry out an instruction (8 marks)
- b) List 4 Measures used to determine the performance of a monitor and state (6 marks)
- c) Explain one merit and demerit of each of the following display systems.
- i) CRT ii) LCD iii) PLASMA (6 marks)
5. a) Describe four steps that you would follow to format your hard drive and install windows. (8 marks)
- b) What is a computer Mother board explain 3 advantages of using Motherboards (6 marks)
- c) What is a computer Network interface Card? (2 marks)
- d) Name any two techniques used to transfer data by a NIC card (2 marks)
- e) Explain two advantages of flat screens over cathode ray tubes/thermionic valves. (2 marks)