



MAASAI MARA UNIVERSITY

**REGULAR UNIVERSITY EXAMINATIONS
2017/2018 ACADEMIC YEAR
SECOND YEAR FIRST SEMESTER EXAMINATION**

**SCHOOL OF SCIENCE AND INFORMATION SCIENCES
UNIVERSITY EXAMINATIONS FOR THE DEGREE OF
BACHELOR OF SCIENCE (COMPUTER SCIENCE)**

COURSE CODE: COM 2204

COURSE TITLE: COMPUTER ORGANISATION

DATE: 29TH APRIL, 2019

TIME: 0830 - 1030HRS

INSTRUCTIONS

Answer Question ONE and any other TWO

SECTION A

QUESTION ONE (COMPULSORY 30 MARKS)

- a) With the help of a diagram explain the idea of a computer system in its most basic form. (5 marks)

- b) A microprocessor is a complete computer on a silicon chip and does all the functions of a computer. List any five functions of the CPU. (5 marks)

- c) Explain what you understand by I/O scheduling and the purposes of scheduling in the Computer Operating system. (5 marks)

- d) Explain the PCI bus and PCI Express as used in the computer mother board. (5 marks)

- e) Explain the InfiniBand as used in computer network communications. (4 marks)

- f) Complete the truth tables below. (6 marks)

AND

INPUT1	INPUT2	OUTPUT
0	0	
0	1	
1	0	
1	1	

NOT

INPUT	OUTPUT
0	
1	

SECTION B

QUESTION TWO (20 Marks)

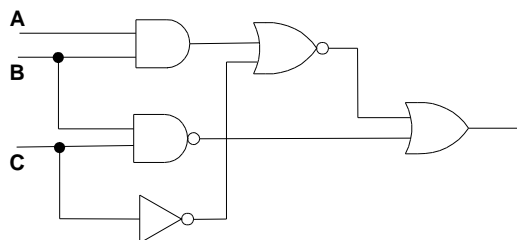
- a) Differentiate between RISC and CISC architecture (10 marks)
- b) Explain the memory hierarchy of the computer. (6marks)
- c) The memory unit stores the binary information in the form of bits, Identify and explain the two memory/storage categories (4marks)

QUESTION THREE(20 Marks)

- a) Briefly explain the four major types of instruction originating from the Control Unit. (4 marks)
- b) As a computer engineer, explain how the computer system handles analog and digital data. (4 marks)
- c) Explain the AND gate giving the logic symbol and the truth table. (4 marks)
- d) Explain the difference between a serial port and parallel port and how each is used. (4 marks)
- e) Briefly explain the I/O peripherals giving examples of each. (4 marks)

QUESTION FOUR(20 MARKS)

- a) There are output devices in computer organization, name 4 output devices. (2 marks)
- b) Briefly explain what a computer bus and give the three types (5 marks)
- c) Show the behavior of the following circuit with a truth table (10 marks)



- d) Explain the difference between “Bit” and “Bytes” giving examples. (3 marks)

QUESTION FIVE(20 MARKS)

- a) Dynamic RAM (DRAM) is a kind of RAM made with cells that store data as charges on capacitors. Discuss about the DRAM cell structure with the help of a well labeled diagram. [5 marks]
- b) Discuss about chip logic in memory technology. [5 marks]
- c) What is the difference between SRAM and DRAM? [5 marks]
- d) Discuss in details, the organization of a semi-conductor memory. [5 marks]

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