



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
1030HRS**

TIME: 0830 -

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

INP UT1	INP UT2	OUT PUT
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0	0	
0	1	
1	0	
1	1	

NOT

IN UT	OUT PUT
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)

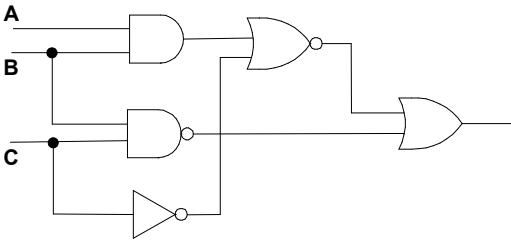
QUESTION THREE(20 Marks)

- 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]

//END

