



MAASAI MARA UNIVERSITY

REGULAR UNIVERSITY EXAMINATIONS

2017/2018 ACADEMIC YEAR

SCHOOL OF SCIENCE AND INFORMATION SCIENCES

**UNIVERSITY EXAMINATIONS FOR THE DEGREE OF BACHELOR
OF SCIENCE (COMPUTER SCIENCE)**

SECOND YEAR FIRST SEMESTER EXAMINATION

COURSE CODE: COM 422

COURSE TITLE: ELECTRONIC CIRCUITS

AND MICROPROCESSORS

DATE: 25TH APRIL 2018

TIME: 11:00AM-1:00PM

INSTRUCTIONS

- **Answer Question ONE and any other TWO.**
- **Use of sketch diagrams where necessary and brief illustrations are encouraged.**
- **Read the instructions on the answer booklet keenly and adhere to them.**

This paper consists of 3 printed pages.

QUESTION ONE: [30 MARKS]

- a. Define Microprocessor and state its basic units **(3marks)**
- b. Define flag and List the flags of 8085 **(2marks)**
- c. Define addressing modes and state its types in 8085 microprocessor. **(4marks)**
- e. Briefly explain the evolution of microprocessor **(5 marks)**
- f. Specify the five control signals commonly used by the 8085 MPU **(3 marks)**
- g. Discuss any five interrupts pins of 8085 **(5marks)**
- h Give difference between memory mapped I/O and I/O mapped I/O **(2marks)**
- i Specify the five control signals commonly used by the 8085 MPU **(2marks)**
- j. What are the difference between 8085 and 8086 **(4marks)**

QUESTION TWO [20 MARKS]

- a. Draw and briefly explain the 8085 microprocessor architecture **(10 marks)**
- b. Explain briefly about the addressing modes of 8085 **(5 marks)**
- c. Explain briefly about instruction set of 8085 **(5marks)**

QUESTION THREE : [20 MARKS]

- a. i. Briefly explain why interfacing is needed for I/O devices. **(2 marks)**
 - ii. Briefly explain Memory Interfacing and I/O Interfacing of 8085 microprocessor **(4 marks)**
- b.i. What are the basic interfacing requirements **(2 marks)**
 - ii. List the serial I/O lines available in 8085 microprocessor **(2 marks)**
- c. Discuss the concept of WAIT states in microprocessors **(4 marks)**
- d. Briefly discuss advantages and disadvantages of having more number of general purpose registers in a microprocessor **(6marks)**

QUESTION FOUR : [20 MARKS]

- a. i. Define assembly language **(2mark)**
ii. Compare machine language and assembly language programs .
(2 marks)
- b. What is the drawback in machine language and assembly language, programs **(2marks)**
- c. Give one examples each of a.Register Addressing mode b.Immediate Adressing mode . **(4marks)**
- d. Write an assembly language programming for addition of two 16 bit data BB11 H and 1122 H **(5marks)**
- f. Write down the instructions that load H-L register pair by the contents of memory location 3500H.Then move the contents to register C **(5marks)**

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