



# **MAASAI MARA UNIVERSITY**

**REGULAR UNIVERSITY EXAMINATIONS  
2017/2018 ACADEMIC YEAR**

**SCHOOL OF SCIENCE AND INFORMATION SCIENCES**

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

**FOURTH YEAR SECOND SEMESTER & SECOND YEAR SECOND  
SEMESTER EXAMINATIONS**

**COURSE CODE: COM 2204 / COM 221**

**COURSE TITLE: COMPUTER ORGANIZATION**

**DATE: 3<sup>RD</sup> MAY 2018**

**TIME: 1100 -1300 HRS**

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## **INSTRUCTIONS**

Answer Question ONE and any other TWO

## **SECTION A**

### **QUESTION ONE (COMPULSORY 30 MARKS)**

- a. Discuss the functions of Linux operating system [6 Marks]
- b. Discuss the input/ output sub system [6 Marks]
- c. Discuss three memory access methods [3 Marks]
- d. Outline three examples of instruction set used by x86 instruction set [3 Marks]
- e. Discuss the four intermediate devices which operates in the physical layer of the OSI model [8 Marks]
- f. Discuss the differences between opcodes and operands [4 Marks]

## **SECTION B**

### **QUESTION TWO**

- a. Discuss miss and hit in regard to cache memory Hit Ratio [4 Marks]
- b. Discuss the following terms
  - i. Interleaving [2 Marks]
  - ii. Bursting [2 Marks]
  - iii. Pipelining [2 Marks]
- c. Discuss the following terms as used in networking
  - (i) Workstation [2 Mark]
  - (ii) Server [2 Mark]
- d. Discuss differences between assemblers and translators [6 Mark]

### **QUESTION THREE**

- a. Discuss differences between the following types of networks
  - (i) Peer-to-peer networks and Client/server networks [6 marks]
  - (ii) LAN (Local Area Network) and wide area network [6 marks]
  - (iii) Star Topology and bus topology [4 marks]
- b. Discuss the following terms
  - (i) S (Sign) flag
  - (ii) Z (Zero) flag [4 marks]

### **QUESTION FOUR**

- a. Discuss the differences between 30-pin SIMMs and 72-pin SIMMs. [10 Marks]
- b. Discuss the differences between synchronous DRAM (SDRAM) Window RAM (WRAM) [10 Marks]

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