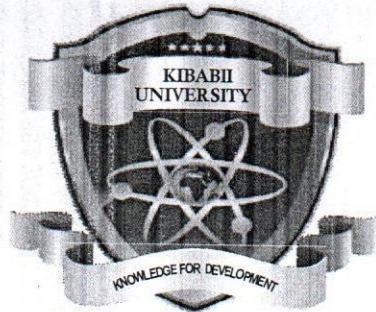


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(Knowledge for Development)

KIBABII UNIVERSITY

**UNIVERSITY EXAMINATIONS
2020/2021 ACADEMIC YEAR**

**END OF SEMESTER EXAMINATIONS
YEAR TWO SEMESTER TWO EXAMINATIONS**

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

COURSE CODE : CSC 222

**COURSE TITLE : MICROPROCESSOR &
ASSEMBLY PROGRAMMING**

DATE: 07/10/2021

TIME: 09:00 A.M – 11:00 A.M

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTIONS ONE AND ANY OTHER TWO.

QUESTION ONE (COMPULSORY) [30 MARKS]

- a) Differentiate between Intel & Motorola Microprocessor [4 Marks]
- b) Describe the 4TH generation microprocessor. [4 Marks]
- c) Describe characteristics of CISC architecture [6 Marks]
- d) True/False Question. Explain your answer
- I. Power PC find its application in military and aerospace.
 - II. RISC has relatively few instructions.
 - III. CISC has fixed length instruction formats.
 - IV. RISC processor executes 1 instruction in one clock cycle. [4 Marks]
- e) Draw and discuss and write cycle timing diagrams of 8086 minimum mode. [4 Marks]
- f) Explain the physical address formation of in 8086 [4 Marks]
- g) How does 8086 differentiate between an opcode and instruction data? [4 Marks]

QUESTION TWO [20 MARKS]

- a) Describe the architectural and signal differences between 8086 and 8088 [6 Marks]
- b) Describe the following [4 Marks]
- i. Cache Hits
 - ii. Cache Miss
 - iii. Cache Consistency
 - iv. Snarf
- c) Differentiate I/O mapped I/O and Memory mapped I/O. [4 Marks]
- d) Give the sum and the flag settings for AF, SF, ZF, CF, OF, and PF after hexadecimally adding 62A0 to each of the following: i. 1234 ii. 4321 iii. CFA0 [6 Marks]