

---

**BITCA3111**

**COMPUTER ARCHITECTURE**

**MODULE DETAILS**

Course Location : Swaziland  
Examiner (s) : Mr. Ndumiso E. Khumalo  
Contact details (email) : [ndumiso.e.khumalo@gmail.com](mailto:ndumiso.e.khumalo@gmail.com)  
Commence Date : Week 3  
Submission Date : No submission required

1. Define cycle stealing
2. Briefly discuss any three functions or requirements of the I/O module.
3. Distinguish between isolated and memory-mapped IO
4. A 16-bit instruction representation system consist of only two fields: a 4-bit opcode field and an operand field.
  - a. How many operations can be represented by this system?
  - b. How many operands can be represented by this system?
5. Explain International Reference Alphabet (IRA) scheme for encoding keyboard input/output.
6. Explain the concept of Direct Memory Access (DMA) and how it works?

..... THE END .....