CS Topic 2-Computer Organization

Class Assessment December 27th 2012

Mr Trofimczuk

**Instructions:**

* **Time provided for assessment will be: 1hr 10min**
* **Total marks for the assessment is out of a score of 35**
* Test results will be provided as a percentage and sent to your email address by Friday December 30th
* **All electronic devices must be turned off**
* Questions will need to be written on the paper provided

Assessment Questions

1. State one function of the operating system in managing memory *(1 mark)*
2. Construct a logic diagram for the Boolean expression: *(4 marks)*

A AND B OR NOT B

1. State one example of application software *(1 mark)*
2. The operating systems in the latest mobile phones allows the user to open more than one application at the same time:
3. State three possible applications that might be open at the same time *(3 marks)*
4. Explain the role of the operating system in the management of these applications *(5 marks)*
5. Outline the architecture of the CPU *(3 marks)*
6. Outline the machine instruction cycle *(4 marks)*
7. Calculate the following binary numbers to decimal *(4 marks)*:

* 11011
* 10101

1. Define Binary *(1 mark)*
2. Define Decimal *(1 mark)*
3. Identify the two types of Data Storage terms for *(2 marks):*

* Volatile memory
* Non-volatile memory

1. Outline the way in which data is represented in a computer *(3 marks)*
2. Outline the functions of the following three layers three of cache memory *(3 marks):*

* Level 1 (L1) cache
* Level 2 (L2) cache
* Level 3 (L3) cache