With answers.

CS2100 TERM TEST #2 ANSWER SHEET

AY2013/4 Semester 2

NAME:

/ 30

TOTAL SCORE

MATRIC. NO.:

U	0							
A	0							

TUTORIAL GROUP:

Write your particulars above legibly using a **pen** (not pencil!). Ensure that your matriculation number is correct and complete (your matriculation number comes with a letter at the end). You may use pencil for your answers below.

SECTION A (2 marks each)

1. **D** 2. **A** 3. **B** 4. **D** 5. **E**

SECTION B (1 mark)

6. **D**

SECTION C (20 marks)

7a [2]	Correct Execution: NO ANSWER / **add $3, $1, $3** Wrong Execution: NO ANSWER / **add $3, $2, $1**
7b [2]	Correct Execution: NO ANSWER / **lw $0, 0($1)** Wrong Execution: NO ANSWER / **lw $1, 0($1)**
7c [2]	Correct Execution: NO ANSWER / **beq $1, $2, 3** Wrong Execution: NO ANSWER / **beq** _____, _____, _____

8	
[1]	**[$s2]** = **4**
[1]	**[$t0]** = **0**
[2]	**[$t1]** = **3**
[2]	**[$t2]** = **216**

Please turn over…

9

[2]

Cycle 4		
ID/EXE	**EXE/MEM**	**MEM/WB**
Read Data 1: **3**	**ALU Result:** **16 (4+12)**	**Memory Result:** X
Read Data 2: **2**		**ALU Result:** X

[2]

Cycle 5		
ID/EXE	**EXE/MEM**	**MEM/WB**
Read Data 1: **3**	**ALU Result:** **18 (16 + 2)**	**Memory Result:** **X**
Read Data 2: **X (or 5)**		**ALU Result:** **16(➔ $3)**

[2]

Cycle 6		
ID/EXE	**EXE/MEM**	**MEM/WB**
Read Data 1: **STALL**	**ALU Result:** **20 (16 + 4)**	**Memory Result:** X
Read Data 2: **STALL**		**ALU Result:** **18(➔ $1)**

[2]

Cycle 7		
ID/EXE	**EXE/MEM**	**MEM/WB**
Read Data 1: **16**	**ALU Result:** **STALL**	**Memory Result:** **20**
Read Data 2: **5**		**ALU Result:** **X**