CS2100

CS2100 Computer Organisation

# Midterm Test — Answer Sheet

AY2024/25 Semester 2

Time allowed: 1 hour 30 minutes

# PLEASE READ THE INSTRUCTIONS IN THE QUESTION PAPER CAREFULLY BEFORE PROCEEDING

#### Important instructions:

- Shade and write your Student Number <u>correctly</u> with a pencil (2B or above) on the right.
- 2. Shade one option for each MCQ in Part A with a pencil (2B or above).
- 3. For Part B, write your answers within the boxes provided. Anything written outside the boxes will not be graded.
- 4. You may use pencil to write your answers for Part B.
- 5. Do not attach any additional sheet to this Answer Sheet; it will be disregarded.

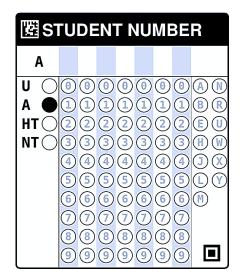
## Part A: Multiple Choice Questions (Total: 20 marks)

Q (A) (B) (C) (D) (E)  $\bigcirc$  $\bigcirc$  $\bigcirc$  $\bigcirc$ Ο 1.  $2. \bigcirc \bigcirc \bigcirc \bigcirc$ Ο Ο  $\bigcirc$ Ο  $\bigcirc$  $\bigcirc$  $\bigcirc$ 3. 0 0 Ο Ο  $\bigcirc$ 4. Ο 5.  $\bigcirc$  $\circ$  $\bigcirc$ Ο Ο  $\bigcirc$ 0 0 6. 7. 0 0 0 $\bigcirc$ Ο 8. () 0 0 Ο Ο Ο Ο Ο  $\bigcirc$ Ο 9. Ο Ο Ο  $\bigcirc$ 10. () (A) (B) (C) (D) (E)

| Q   | (A)        | (B)        | (C)        | (D)        | (E)        |
|-----|------------|------------|------------|------------|------------|
| 11. | 0          | 0          | 0          | $\bigcirc$ | $\bigcirc$ |
| 12. | 0          | 0          | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |
| 13. | 0          | 0          | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |
| 14. | 0          | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |
| 15. | $\bigcirc$ | $\bigcirc$ | 0          | $\bigcirc$ | 0          |
| 16. | $\bigcirc$ | 0          | 0          | 0          | 0          |
| 17. | 0          | 0          | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |
| 18. | 0          | 0          | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |
| 19. | 0          | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |
| 20. | 0          | 0          | 0          | $\bigcirc$ | $\bigcirc$ |
|     | (A)        | (B)        | (C)        | (D)        | (E)        |

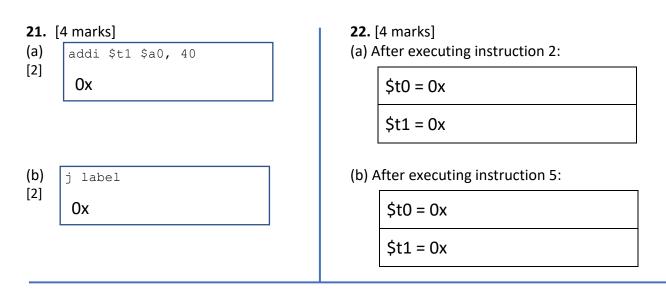
## For Examiner's Use Only

| Questions | Marks |
|-----------|-------|
| PART A    | /20   |
| PART B    | /20   |
| TOTAL     | /40   |



### Part B (Total: 20 marks)

Write your answers within the boxes provided. Anything written outside the box will not be graded.



### 23. [6 marks]

| <ul><li>(sign-extend output)</li></ul>   | 0x |
|--|----|
| (Add result)                             | 0x |
| (to the PC)                              | 0x |
| ④ (Read data 2)                          | 0x |
| <b>၆</b> (ALU result)                    | 0x |
| <ul> <li>(ALU control output)</li> </ul> | Ob |

#### 24. [6 marks]

| \$t0 = 0x | (2 marks) |
|-----------|-----------|
| \$t1 = 0x | (1 mark)  |
| \$t2 = 0x | (1 mark)  |
| \$t3 = 0x | (1 mark)  |
| \$t4 = 0x | (1 mark)  |

#### === END OF PAPER ===