## Quiz 16. Perfect phylogeny

You are given 2 binary matrices representing 5 objects in terms of 5 characters or traits.
1 . Which of the two has a perfect phylogenetic tree?

|  | 1 | 2 | 3 | 4 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| A | 1 | 1 | 0 | 0 | 0 |
| B | 0 | 0 | 1 | 0 | 0 |
| C | 1 | 1 | 0 | 0 | 1 |
| D | 0 | 0 | 1 | 1 | 0 |
| E | 0 | 1 | 0 | 0 | 0 |
| A |  |  |  |  |  |


|  | 1 | 2 | 3 | 4 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| A | 1 | 1 | 0 | 0 | 0 |
| B | 0 | 0 | 1 | 0 | 1 |
| C | 1 | 1 | 0 | 0 | 1 |
| D | 0 | 0 | 1 | 1 | 0 |
| E | 0 | 1 | 0 | 0 | 1 |

B
2. Build this tree

|  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| A |  |  |  |  |  |
| B |  |  |  |  |  |
| C |  |  |  |  |  |
| D |  |  |  |  |  |
| E |  |  |  |  |  |


| Sorted |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| A |  |  |  |  |  |
| B |  |  |  |  |  |
| C |  |  |  |  |  |
| D |  |  |  |  |  |
| E |  |  |  |  |  |

