

#### Question 4

b)  $B = \{3, 2, 1, 0\}$

$$P(B) = 2^4 = 16$$

level 0  $\rightarrow \{\emptyset\}$

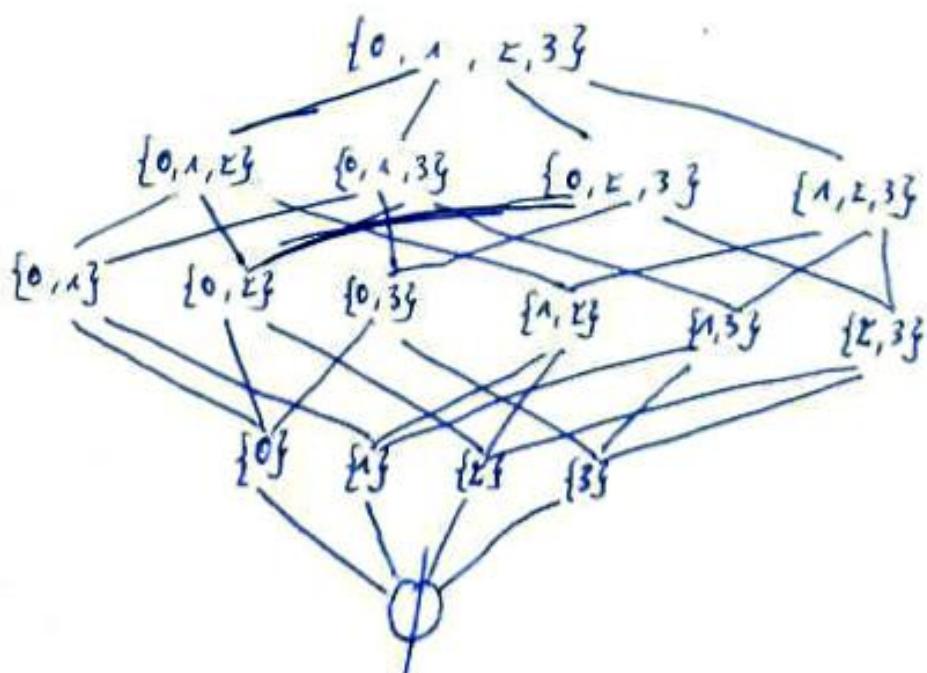
level 1  $\rightarrow \{\{0\}, \{1\}, \{2\}, \{3\}\}$

level 2  $\rightarrow \{\{0, 1\}, \{0, 2\}, \{0, 3\}, \{1, 2\}, \{1, 3\}, \{2, 3\}\}$

level 3  $\rightarrow \{\{0, 1, 2\}, \{0, 1, 3\}, \{0, 2, 3\}, \{1, 2, 3\}\}$

level 4  $\rightarrow \{0, 1, 2, 3\}$

poset  $(P(B), \subseteq)$ , it is arranged from smallest to bottom and largest to top



dual poset  $(P(B), \supseteq)$

dual poset  $(P(B), \supseteq)$

