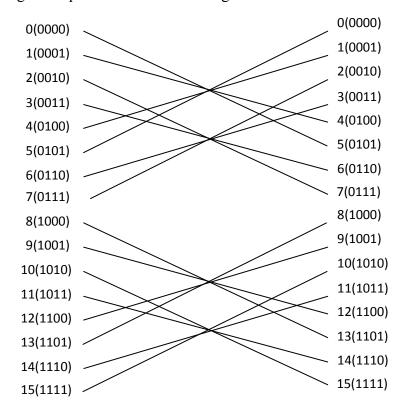
## **Problems**

## Solutions to be submitted:

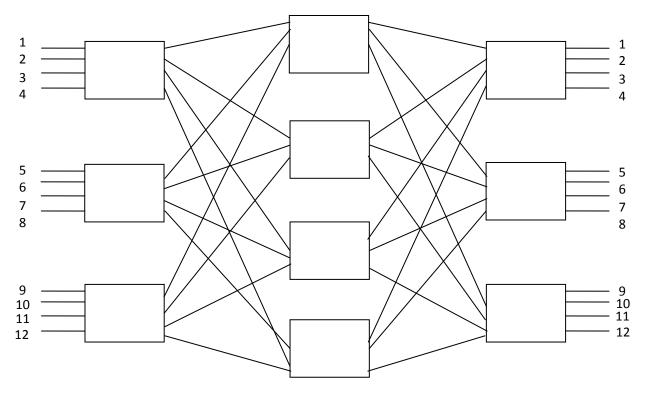
1.1 In a  $16 \times 16$  switching unit, the connection function is

$$f(x_3x_2x_1x_0) = x_3\overline{x_2}x_1\overline{x_0}$$

Draw the diagram expression of the switching unit.



1.2 Draw a three stage 12×12 CLOS network where the input number of each switching unit in the first stage is 4, the numbers of switching units in the second stage are 4, the output number of each switching unit in the third stage is 4.



1.3 Draw an  $8 \times 8$  Banyan network (any type). Show a package which enters the network from the first input port  $(0\ 0\ 0)$ , with the destination address  $(1\ 1\ 0)$ , how to self-route through the network.

