Quiz-02

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Course : CSE231L

Section : 10

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Ans to the QNO : 01

(1) 7.

Ans to the QNO : 02

(3) 14.

Ans to the QNO : 03

Combinational circuit	Sequential Circuit.
(1) Combinational circuits no memory element is present.	(1) In sequential circuits memory element is present.
(2) The behavior of Combinational circuit is described by the set of output functions.	(2) The behavior of sequential circuit is described by the set of next state functions and the set of output functions.

(3). Its operation can be described by truth table.	(3) Its operation can be described by truth table and timing diagram.
(4) Combinational circuit are more expensive.	(4) Sequential circuits are cheaper.
(5). Combinational circuits are faster in speed.	(5) Due to the memory elements the speed of the sequential circuit is slow.

Ans to the QNO: 04

Flip Flop	Latch.
(1) Flip-flop is a bistable device and there are two stable states which are represented as 0 and 1.	(1) Latch is also a bistable device and the state of the latch is represented as 0 and 1.
(2) Flip-flop is sensitive to the clock signals and until there is a change in the input clock signal, it never changes the output.	(2) Latch is sensitive to the input and as long as it is 'on', we can transmit the data.

(3) Flip Flop is synchronous because flip flop works on the basis of the clock signal.	(3) Latch is asynchronous because latch doesnot work on the basis of the time signal.
(4) More power is consumed by the flip-flop.	(4) Less power is consumed by the latches.
(5). Flip-Flop are slow as compared to the latches.	(5). Latches are fast as compared to the flip-flop.

Ans to the QNO :05

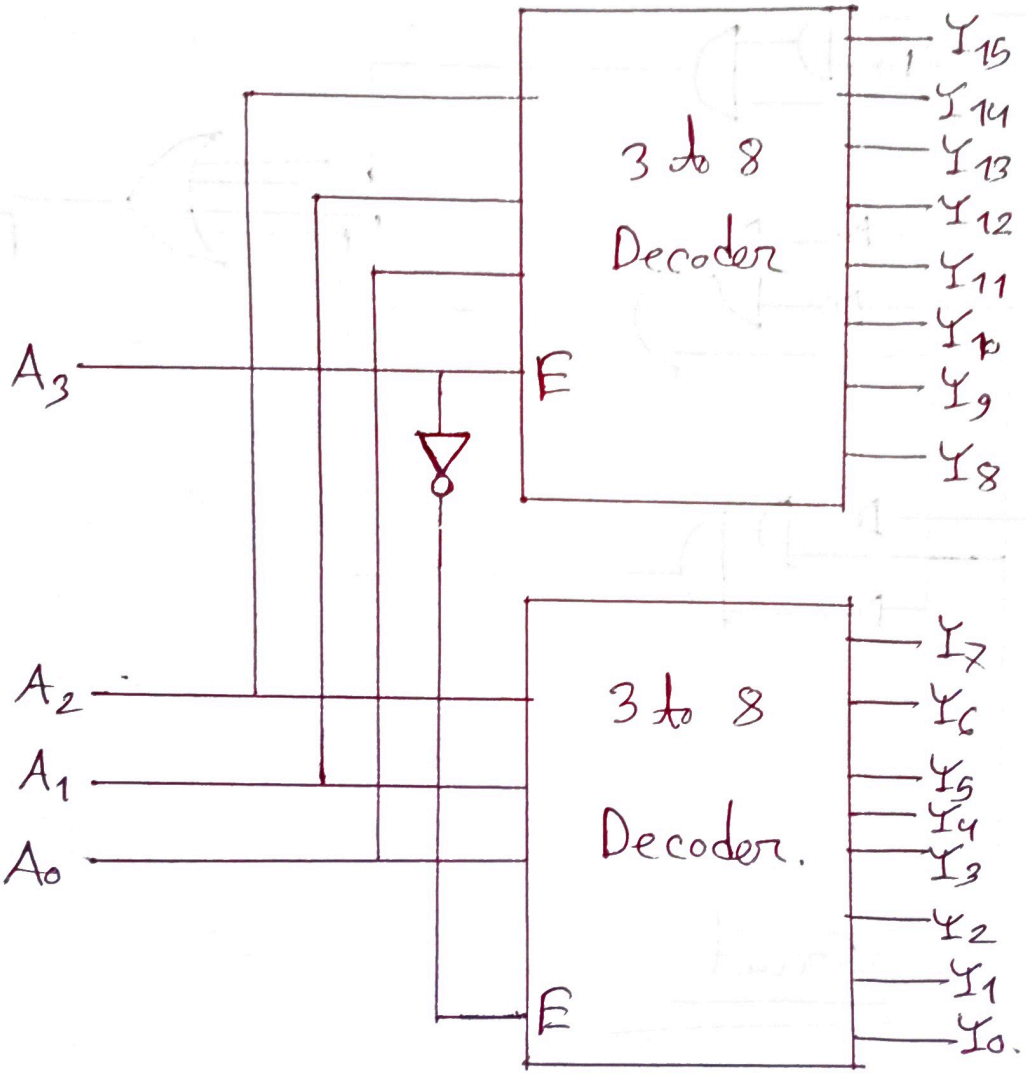
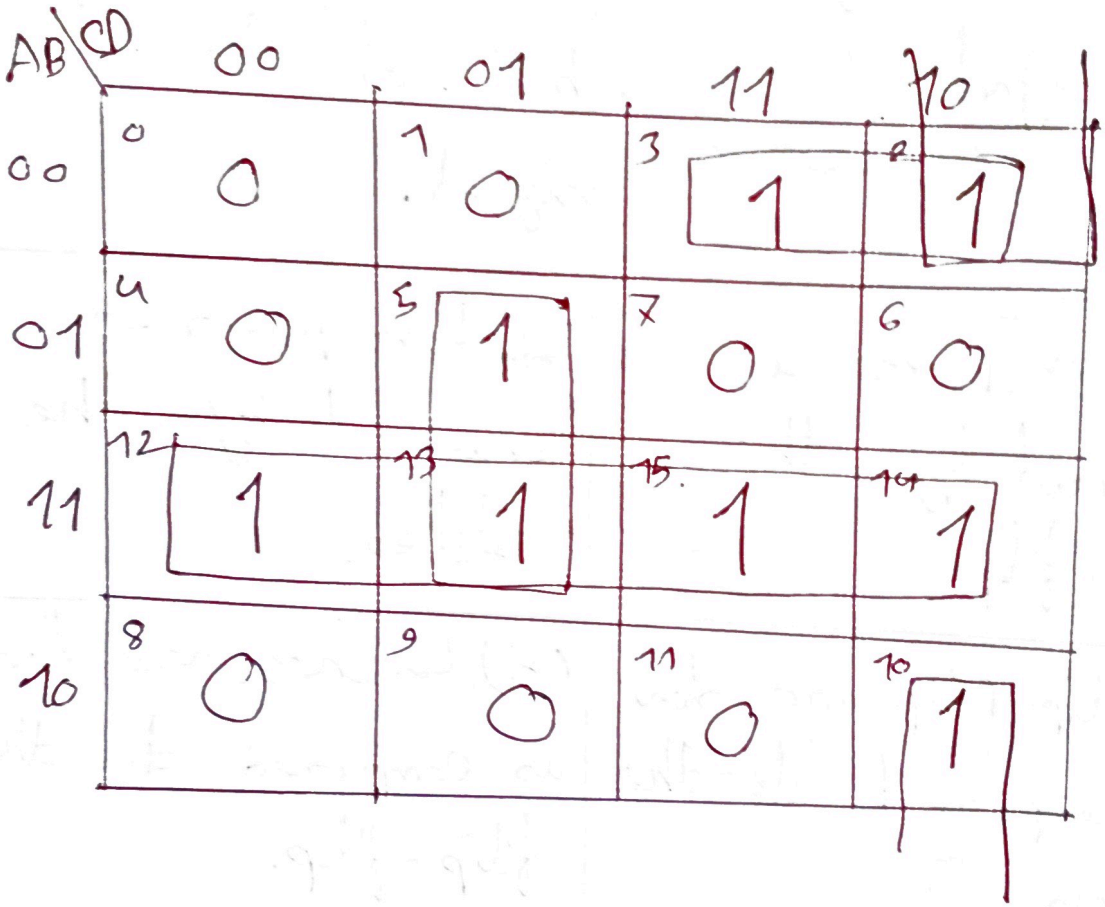


Figure : 4 to 16 line decoder using 3 to 8 line decoder.

Ans of the QNO : 06

$F(A,B,C,D) = (2,3,5,10,12,13,14,15)$



~~$F = AB + B\bar{C}D + \bar{A}\bar{B}C + \bar{B}C\bar{D}$~~

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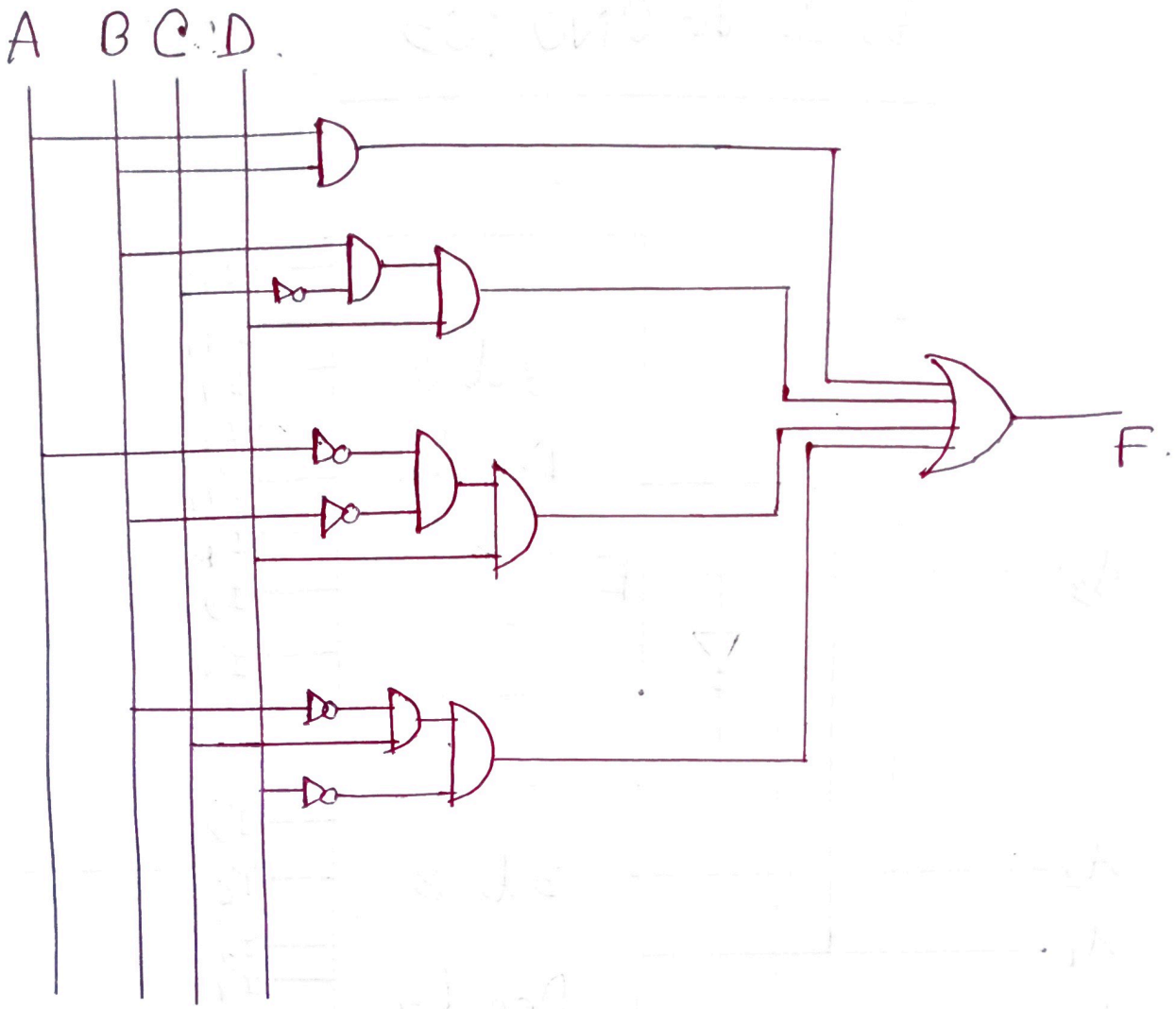

Circuit