# **中**



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## ECE213: Digital Electronics





🔀 ajmer, 17381 Olpu, co, in











### The Course Contents

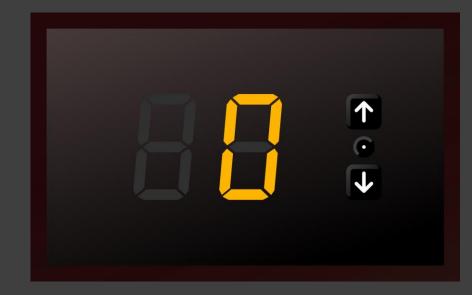
### Unit V

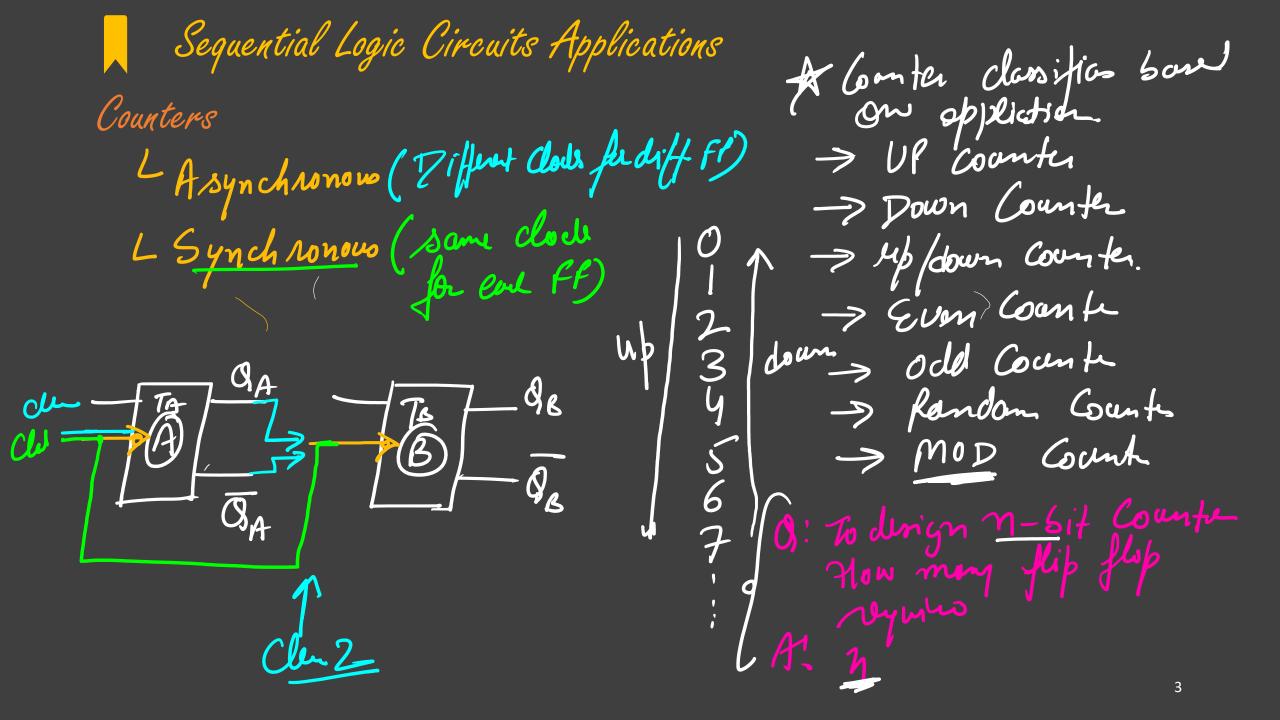
Sequential Logic Circuits Applications; Registers:

Operation of all basic Shift Registers, Counters:

Design of Asynchronous and Synchronous counters,

Ring counter and Johnson ring counter





# Sequential Logic Circuits Applications Counters & How to design synchronous Counts

Step 1! Find the number of flip flup regular erspec the application.

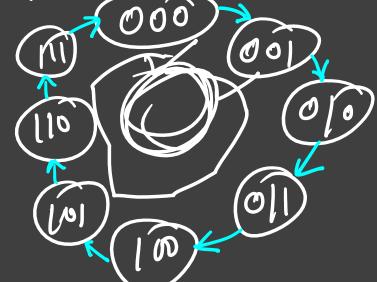
Step 2! Decide the type of FF (JK, T, SR, D), and make the

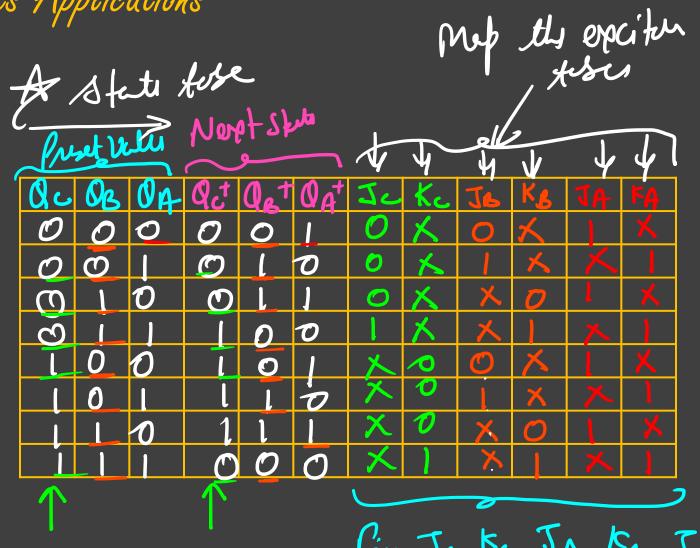
expertetion have to ff. Sub 9: Make the state dign en state tible of Counter Sub 9: Mapping of Excitation taken over State table Sty6 Draw My logie diogn:

Counters Ex Periz 3-bit syn. up conta Styll 1000 of ff = 3, Nome to FF A, B, C, who fis LSB. Style Pyter of ff: TK

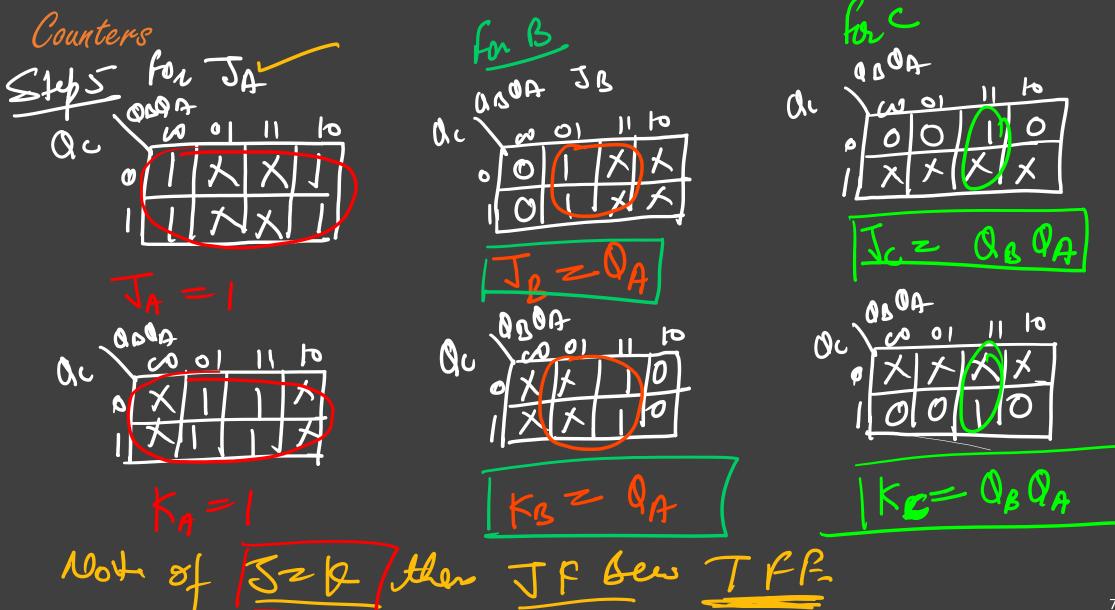
Qn	anti		J		K
<del>-&gt;</del> 0	0	$\int$	0	4	X
<b>→</b> 0		$\perp$		$\not$	
	0		<u>(X)</u>	_	
l	1		X		0

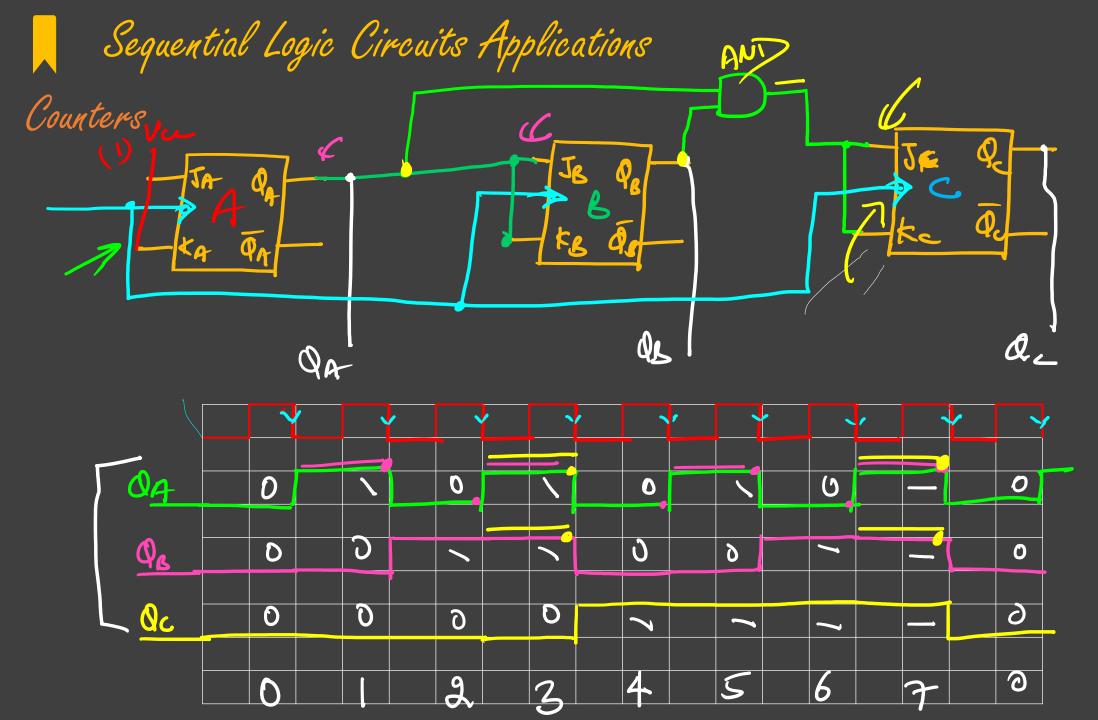






Fin Jc, Kc, Jo, Ko, JA,KA





### MCQ

Which of the following is the advantage of Asynchronous counter

- A It is faster than synchronous X
- B It has no decoding error 🗶
- C it is easy to design and implement
- D it will work in any desired count.

