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ST. LAWRENCE HIGH SCHOOL



A Jesuit Christian Minority Institution

WORKSHEET -24(ANSWER KEY)

<u>Topic – Ring Counter</u>							
Subject: COMPUTER SCIENCE Class - 12				F.M:15			
Chapter: Sequential Logic Circuits				Date: 29/06/2020			
<u>Choos</u>	se the correct answer for	each question:		[15 X 1 = 15]			
1.	Ring counter is an example o	f					
	b) Asynchronous counters						
	c) True binary counters						
	d) Synchronous and true bina	ary counters					
2.	A ring counter is a special typ	be of application of th	ne	Shift register.			
	a) Parallel-in Parallel-out						
	b) Parallel-in Serial-out						
	c) <u>Serial-in Serial-out</u>						
	d) Serial-in Parallel-out						
3.	Which among the following i	s correct?					
	a) No. of states in Ring count	er > No. of flip-flop u	ISEd				
	b) No. of states in Ring count	$\frac{\text{ter} = \text{No. of flip-flop}}{\text{or } < \text{No. of flip flop u}}$	<u>usea</u>				
	d) All of these	$e_1 < 100$. Of http-hop u	iseu				
Д	What is the difference betwee	en a shift register ar	nd a ring counter?				
4.	a) There is no difference						
	b) last flip flop outcome is ta	ken as the output in	the shift register				
	c) last flip flop outcome is pa	assed to the first flip	flop as an input				
	d) both (a) and (b)	·····					
5.	The output of the first flip flo	p is used to form the	e ring in the ring c	ounter and referred			
	to as:						
	a) Clock pulse						
	b) Overriding input						
	c) <u>Preset 1</u>						
	d) None of these						
6. In a 4-bit ring counter, how many states are possible?							
	a) one						
	b) two						
	c) <u>four</u>						
_	d) eight	с <u>, , , , , , , , , , , , , , , , , , ,</u>	2				
7. What is the preset condition for a ring shift counter?							
	a) All FFS SET TO 1						
	D) All FFS cleared to U						

c) A single 0, the rest 1 d) A single 1, the rest 0 8. If a 10-bit ring counter has an initial state 1101000000, what is the state after the second clock pulse? a) 1101000000 b) 0011010000 c) 110000000 d) 0000000000 9. The outcome of the flip-flop is passed to the flip-flop as an input. a) last, last b) first, first c) last, first d) none of these 10. The ring counter circulates the _____ bit(s) around the ring. a) one b) two c) four d) eight 11. The Overriding input is used as _____ and _____. a) clear, set b) clear, pre-set c) set, reset d) clear, clock 12. The Pre-set 1 is generated when: a) ORI is set to low, clk doesn't care b) ORI is set to high, low clock pulse signal is passed as the negative clock edge triggered c) both (a) and (b) d) none of these 13. We can convert a standard shift register circuit into a ring counter by: a) adding an extra flip-flop b) looping the output back to the input c) both (a) and (b) d) none of these 14. A 4-bit ring counter is also known as: a) mod-3 counter b) mod-4 counter c) mod-5 counter d) mod-8 counter 15. A mod-8 ring counter requires flip-flops. a) two b) four c) eight d) sixteen Phalguni Pramanik