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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute)

Affiliated to Dr. A.P.J. Abdul Kalam Technical University, Uttar Pradesh, Lucknow

M.Tech

FIRST YEAR (SEMESTER-II) THEORY EXAMINATION (2020-2021)

Subject Code: AMTVL0202

Subject: Low Power VLSI Design

Max Marks : 40

Time : 70 Minutes

General Instructions:

All questions are compulsory.

Question No- 1 to 5 are objective type question carrying 2 marks each.

Question No- 6 to 20 are also objective type/Glossary based question carrying 2 marks each.

Q.No	Question Content	Question Image	Category	Sub Category	Marks	Options Randomization	Type	Difficulty	Correct	Option1	Option2	Option3	Option4
1	In CMOS logic circuit the n-MOS transistor acts as:		Single Choice Questions	Single Choice Questions	2		Single Choice	Smart	Pull down network	Load	Pull up network	Pull down network	Not used in CMOS circuits
2	Entropy of N random variables is the _____ of the entropy of individual random variable.		Single Choice Questions	Single Choice Questions	2		Single Choice	Smart	Sum	Sum	Product	Sum of squares	Average
3	When S=0, R=0, CLK=X then the output will be _____.		Single Choice Questions	Single Choice Questions	2		Single Choice	Smart	no change	no change	set	reset	invalid
4	The CMOS inverter has _____ power dissipation.		Single Choice Questions	Single Choice Questions	2		Single Choice	Smart	no	low	more	no	very less
5	The MOSFET combines the areas of _____ & _____		Single Choice Questions	Single Choice Questions	2		Single Choice	Smart	Field effect & MOS technology	Field effect & MOS technology	Semiconductor & TTL	MOS technology & CMOS technology	none of the mentioned
6	Power is the rate at which is………. delivered or exchanged		Glossary I	Glossary I	2		Single Choice	Brilliant	Energy	Energy	L/W	average energy symbol/log2 M	
7	Gate area can be given as………..		Glossary I	Glossary I	2		Single Choice	Brilliant	L/W	Energy	L/W	average energy symbol/log2 M	
8	Self information should be…………		Glossary I	Glossary I	2		Single Choice	Brilliant	average energy symbol/log2 M	Energy	L/W	average energy symbol/log2 M	
9	The entropy of an isolated system can never ____		Glossary II	Glossary II	2		Single Choice	Brilliant	decrease	decrease	Bits	Infinite	
10	The unit of average mutual information is…………….		Glossary II	Glossary II	2		Single Choice	Brilliant	Bits	decrease	Bits	Infinite	
11	The self information of random variable is…………………		Glossary II	Glossary II	2		Single Choice	Brilliant	Infinite	decrease	Bits	Infinite	
12	In S-R flip-flop, if Q = 0 the output is said to be _____		Glossary III	Glossary III	2		Single Choice	Brilliant	Reset	Reset	8 combinational inputs	Several SSI logic gates or combinational logic circuits	
13	3 bits full adder contains _____.		Glossary III	Glossary III	2		Single Choice	Brilliant	8 combinational inputs	Reset	8 combinational inputs	Several SSI logic gates or combinational logic circuits	
14	One multiplexer can take the place of _____.		Glossary III	Glossary III	2		Single Choice	Brilliant	Several SSI logic gates or combinational logic circuits	Reset	8 combinational inputs	Several SSI logic gates or combinational logic circuits	
15	A combinational circuit that selects one from many inputs are _____		Glossary IV	Glossary IV	2		Single Choice	Brilliant	Multiplexer	Multiplexer	Selected lines	number of transistors	

Q.No	Question Content	Question Image	Category	Sub Category	Marks	Options Randomization	Type	Difficulty	Correct	Option1	Option2	Option3	Option4
16	In a multiplexer, the selection of a particular input line is controlled by _____		Glossary IV	Glossary IV	2		Single Choice	Brilliant	Selected lines	Multiplexer	Selected lines	number of transistors	
17	……………………...is the main factor which determines the memory capacity.		Glossary IV	Glossary IV	2		Single Choice	Brilliant	number of transistors	Multiplexer	Selected lines	number of transistors	
18	_____ topology requires a multipoint connection.		Glossary V	Glossary V	2		Single Choice	Brilliant	Bus	Bus	Data	power	
19	In D flip-flop, D stands for _____		Glossary V	Glossary V	2		Single Choice	Brilliant	Data	Bus	Data	power	
20	increasing integration levels, ……………………. has become a critical design parameter		Glossary V	Glossary V	2		Single Choice	Brilliant	power	Bus	Data	power	