	Cat-1.
	IDS (Question Bank) Page No. Date: 10 04 202)
	Which gates are called as the Universal
The state of the s	Grates What are its advantage ?
An	1. NAND and 2. NOR gates are called as the Universal Gates
The Market	as the Universal Gater
1 500	
	Its advantages is that they are economical and easier to fabricate and are the basic gates used in all IC digital logic families.
Cycl. 180.	economical and easier to fabricate and
01/1 (11/1)	are the basic gates used in all TC
	digital logic families
2.	Explain classification of Number system,
Øn.	Namber system,
Number System	
1 montes	331011
74.3	Weighted Number System Non-Weighted
	Weighted Number System Non-Weighted Number System
	Number system
1,0-1,04501	-> Decimal -> Gray Code
61150	
th5 (+) 4/1 "	Critess 3 wat
	- Henadecimal
tla B	- Tertage and
3.	Explain of a Division of Ordina
	Explain about Diminished Radix
1	complement.
du	If r is the base of the number system,
then there are two types of complements	
that are possible i.e. r's and (r-1)'s.	
The (7-1)'s complement is known as Diminished Radix Complement	
(g)	(x-1)s complement = ? (x') 10')-N
	$(\gamma-1)$'s complement = $\{(\gamma^n) 10^{-1}\}$ -N n = number of digits in the number N = is the given number r = base of the number
	N = 15 the given humber

	and the second of the second o
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4	What is meant by parity bit?
du	A panty bit is a bit, with a value
	of 0 or 1, that is added to a block of
	the data either an odd or even parity.
	one wast look of the distance of
	Parity bits are often used in data transmission
3	to ensure the data is not consupted during the
E P	transfer process
E	Deline duelity property
App	Define duality property. According to this principle, if we have
	postulator or theorems of Broolean Algebra
	for one type of operation then that operation
	can be converted into another type of
	operation
Vision 1	1.e. OND can be innverted to OR and rice-versa.
	FIND COUT BE WITHOUT IN THE O'
7	(+) sign with (.) sign and (.) sign with (+) sign
	Acron Moral Very
6	perform (-50)-(-10) in binary using the
	signed - 2's complement.
des	Transplant 1
12400's	the manufacture of the property of the property
1.5/11	manual to 28 did dud and a road Day
	March Sold of the March of the State of the
	Augustalana V. Land Ladissina Landina
,	The delated Magnet Personal
8	in the (set = mendion files)
2	The number of digits his the numbers

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7	Determine the value of base X if $(211)_{M} = (152)_{8}$
	(211)n = (152)8
A	(211)n = (152)g
	$\Rightarrow 2xn^2 + 1xn' + 1xn^\circ = 1x8^2 + 5x8' + 2x8^\circ$
	$= 2n^2 + n + 1 = 64 + 40 + 2$
	$= 2n^2 + n + 1 - 64 - 40 - 2 = 0$
	$= 2n^2 + n - 105 = 0$
3	$\Rightarrow \gamma_{-} - b \pm \sqrt{(1)^2 - 4(2)(-105)}$
do .	2 X Z
	$n = -\frac{1}{4} \sqrt{1 + 840}$
	-1 + (29)
Control of	3 h - 4
	n = 7 Ans
Medien	To State and Explain the Deliveran's
8.	Define binary logic?
Dry	Binary logic is the boxis of electronic
10-1	systems, such as computers and cell
	phones. It works on O's and I's.
	It involves addition, subtraction,
	multiplication, division of zeros and
	It includes logic gaters functions, AND,
	OR and NOT which translates mont
	or and NOT which translates mont signals into specific output.

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R.	BCD ii) Excess-3
Pri G	C+ 1/2 1/2 1/2 - 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2
	Constitution of the Consti
	ARONA ARONA MALANA
	Want V
12	State and Explain the DeMorgan's Theorem.
dus	Do Mario do II and a Mario de
	complement of the product of all the terms is equal to the sum of the complement of each term.
	1-en addition AB II A + B
	A+BI = A B

2		2
	Page No.	-
15.00		
	terms is ment of the sum of all the	-
	comple is equal to the product of the	THE STATE OF THE S
4,50-4 ()	The complement of the sum of all the terms is equal to the product of the complement of each term.	00
B150-01		
	a NAND rate is southed	
	According to this theorem, a NAND gate is equivalent to an OR gate with inverted inputs.	
	mpus.	
- []	Similarly	-13-
	a NOR gate is equivalent to	7
	a NOR gate is equivalent to an AND gate with inverted imputs.	a Pe
iz	24(811) - 1-10	12
On /	Evaluate (198), + (12121)3 = ()8	10
	(198),2	
	= 1×129	Die V
China C	$= 1 \times 12^{2} + 9 \times 12 + 8 \times 12^{2}$	
5.	= 144+108+8 = 260	
	(12121)	
	- 1224 - 3	a a
	$= 2 \times 3 + 2 \times 3 + 1 \times 3^{\circ} + 2 \times 3^{1} + 1 \times 3^{\circ}$	
	= 151	
	31 8	192
		0
		-
2		
A STATE OF THE STA		

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14.	Define Associative Law and Distributive		
	Law ?		
dy	Associative land		
	- The addition or multiplication of there grouping		
2)-	number is independent of their grouping		
	or association		
	or American Indiana I to the ac		
3	The grouping or combination of there		
A	numbers while adding or munipaying		
	The grouping or combination of twill numbers while adding or multiplying them doesn't change the result.		
	e, A+(B+()= (A+B)+(
	$A \times (B \times C) = (A \times B) \times C$		
3	Contract of the contract of th		
	198),2		
	Distributive law service		
	Distributive law :- The product of a number with a sum is equal to the sum of the products of the number with each torm under the addition:		
	is equal to the sum of the products		
	of the number with each town under		
	the addition		
	n(y+2) = ny + nz		
elle-			

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	1 V NOR gate using	
19	Realize 2 input X-NOR gate using NAND gates only.	- T
Ans		
	Inputs Output	
V	A. B (AB)' (A (AB)')'	
	(A (AB)' (AB)', B (B (AB)')'	
	(A(AB)), (B(AB)), A'B + AB	<u></u>
a dilaw	None that on the Contract on 4 is	
(15+1)	Now the output from gate no 4 is the overall output of the configuration	
		W 4
	Y = ((A(AB)')' (B(AB)')')'	
	= (A(AB')" + (B(AB)')"	
	= (A(AB)') + (B(AB)')	<u> </u>
	= (A(A'+B)')+(B(A'+B'))	
	= (AA' + AB') + (BA' + BB')	
	= (0+AB'+BA'+O)	1
	- AB' + BA'	
	Y = AB' + A'B	
		0
		7
		E
No.		, i

	The state of the s	age No.
20	Realize 2 input X-OR gate gates only From De Morgan's theorems	using NOR
An	From De Morgan's theorems	i wh.
7	(A+B)' = A'B' (A'+B')' = A''B'' = AB	
9	(A+5) - 113 = 113	
)	Grate No Inputs 0	utput (A+B)
	0.10.01	(A+/A+B)')' (B+(A+B)')'
	3 (A+B)', B 4 (A+(A+B)')', (B+(A+B)')'	AB+A'B'
	LANGER STATE OF THE STATE OF TH	
	TON TONY OF ALTERNATION OF	
	(4/8) 4/8/1/12/194/194/19	
	Company of the Compan	
3		