Program: ETRX Engineering
Curriculum Scheme: Rev2016
Examination: Second Year Semester III
Course Code: ELX 303 and Course Name: DCD

Time: 1 hour   Max. Marks: 50

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For the students:- All the Questions are compulsory and carry equal marks .

Q1.	The octal number (651.124)8 is equivalent to _____
Option A:	(1A9.2A)16
Option B:	(1B0.10)16
Option C:	(1A8.A3)16
Option D:	(1B0.B0)16
Q2.	The octal equivalent of the decimal number (417)10 is _____
Option A:	(641)8
Option B:	(619)8
Option C:	(640)8
Option D:	(598)8
Q3.	Convert the hexadecimal number (1E2)16 to decimal:
Option A:	480
Option B:	483
Option C:	482
Option D:	484
Q4.	The number of values applicable in Boolean Algebra.
Option A:	1
Option B:	2
Option C:	3
Option D:	4

Q5.	The symbol + in Boolean is also known as the _____ operator.
Option A:	AND
Option B:	OR
Option C:	ADD
Option D:	SUMMATION
Q6.	In the expression Y + X'.Y, which operator will be evaluated first?
Option A:	'
Option B:	+
Option C:	.
Option D:	,
Q7.	Which of the following is false?
Option A:	x+y=y+x
Option B:	x.y=y.x
Option C:	x.x'=1
Option D:	x+x'=1
Q8.	As per idempotent law, X + X will always be equal to _____
Option A:	0
Option B:	1
Option C:	X
Option D:	2X
Q9.	The expression for involution law is _____
Option A:	x+y=y+x
Option B:	x+1=1
Option C:	(x')'=x
Option D:	x.x=x

Q10.	Who proposed the use of Boolean algebra in the design of relay switching circuits?
Option A:	George Boole
Option B:	Claude E. Shannon
Option C:	Claude E. Boole
Option D:	George Shannon
Q11.	Truth table is used to represent Boolean _____
Option A:	functions
Option B:	algebra
Option C:	operators
Option D:	addition
Q12.	Boolean Function is of the form of _____
Option A:	Truth values
Option B:	K=f(X,Y,X)
Option C:	Algebraic Expression
Option D:	Truth Table
Q13.	The terms in SOP are called _____
Option A:	max terms
Option B:	min terms
Option C:	mid terms
Option D:	sum terms
Q14.	Which of the following is an incorrect SOP expression?
Option A:	x+x.y
Option B:	(x+y)(x+z)
Option C:	x

Option D:	x+y
Q15.	The corresponding min term when x=0, y=0 and z=1.
Option A:	x.y.z'
Option B:	X'+Y'+Z
Option C:	X+Y+Z'
Option D:	x'.y'.z
Q16.	Which operation is shown in the following expression: (X+Y').(X+Z).(Z'+Y')
Option A:	NOR
Option B:	ExOR
Option C:	SOP
Option D:	POS
Q17.	The number of min terms for an expression comprising of 3 variables?
Option A:	8
Option B:	3
Option C:	0
Option D:	1
Q18.	The output of AND gates in the SOP expression is connected using the _____ gate.
Option A:	XOR
Option B:	NOR
Option C:	AND
Option D:	OR
Q19.	The expression A+BC is the reduced form of _____
Option A:	AB+BC
Option B:	(A+B)(A+C)

Option C:	(A+C)B
Option D:	(A+B)C
Q20.	Electronic circuits that operate on one or more input signals to produce standard output _____
Option A:	Series circuits
Option B:	Parallel Circuits
Option C:	Logic Signals
Option D:	Logic Gates
Q21.	A _____ gate gives the output as 1 only if all the inputs signals are 1.
Option A:	AND
Option B:	OR
Option C:	EXOR
Option D:	NOR
Q22.	When logic gates are connected to form a gating/logic network it is called as a _____ logic circuit.
Option A:	combinational
Option B:	sequential
Option C:	systematic
Option D:	hardwired
Q23.	The universal gate that can be used to implement any Boolean expression is _____
Option A:	NAND
Option B:	EXOR
Option C:	OR
Option D:	AND

Q24.	Which statement below best describes a Karnaugh map?
Option A:	It is simply a rearranged truth table
Option B:	The Karnaugh map eliminates the need for using NAND and NOR gates
Option C:	Variable complements can be eliminated by using Karnaugh maps
Option D:	A Karnaugh map can be used to replace Boolean rules
Q25.	The Boolean expression Y = (AB)' is logically equivalent to what single gate?
Option A:	NAND
Option B:	NOR
Option C:	AND
Option D:	OR