Program: Information Technology Engineering
Curriculum Scheme: Rev2016
Examination: Second Year Semester III
Course Code: ITC302 and Course Name: Logic Degin
Time: 1 hourMax. Marks: 50

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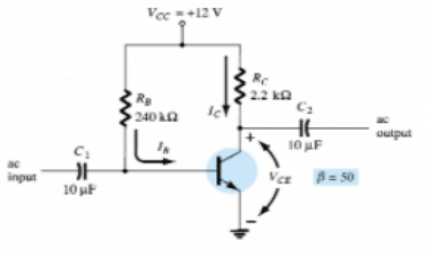
For the students:- All the Questions are compulsory and carry equal marks .

Q1.	To implement following equation with 2 OR gates how many AND gates are required Y = ABC + D + G?
Option A:	5
Option B:	3
Option C:	6
Option D:	2
Q2.	What is the meaning of triggering pulse.
Option A:	A pulse that reverses the cycle of operation
Option B:	A pulse that prevents a cycle of operation
Option C:	A pulse that enhances a cycle of operation
Option D:	A pulse that starts a cycle of operation.
Q3.	(AB)' = A' + B' Is _____ law
Option A:	Absorption law
Option B:	DeMorgan's law
Option C:	Commutative law
Option D:	Associative law
Q4.	Select correct relationship between emitter current of a BJT and base ?
Option A:	IB = β IE
Option B:	IB = IE
Option C:	IB = (β + 1) IE
Option D:	IE = (β + 1) IB
Q5.	Select the correct equation for function f (A,B,C) =P M (0,1,5)
Option A:	(A+B+C) (A'+B'+C')
Option B:	(A+B+C) (A+B+C') (A'+B+C')
Option C:	(A+B+C') (A+B'+C')
Option D:	(A+B'+C')
Q6.	Ripple counter is also known as Asynchronous
Option A:	SSI counter
Option B:	Synchronous counter
Option C:	VLSI counter
Option D:	Asynchronous counter
Q7.	A Sum term containing all K variables of the function in either complemented or uncomplemented form is known as

Option A:	Minterm
Option B:	Midterm
Option C:	Maxterm
Option D:	∑ term
Q8.	From the given circuit, using a silicon transistor, what is the value of IBQ? 
Option A:	47.08 mA
Option B:	47.08 uA
Option C:	50 uA
Option D:	0 mA
Q9.	Select the correct boolean equation for the sum and carry in Half adder.
Option A:	AB+A'B' , AB
Option B:	A'B+AB' , AB'
Option C:	A'B+AB' , AB
Option D:	AB+A'B' , AB'
Q10.	Y=AB+BC+AC is a example of _____
Option A:	AND
Option B:	POS
Option C:	SOP
Option D:	NAND
Q11.	Select the region which must the operating point be set ,For best operation of a BJT.
Option A:	Active region
Option B:	Cutoff region
Option C:	Saturation region
Option D:	Reverse active region
Q12.	Which and How many Gates are required to make a full adder
Option A:	1 ADD, 2 OR, 2 XOR
Option B:	2 ADD, 1 OR, 2 XOR
Option C:	3 ADD, 1 OR, 2 XOR
Option D:	4 ADD, 0 OR, 1 XOR
Q13.	The Type of the loop index used by FOR loop is_____
Option A:	STD_LOGIC_VECTOR
Option B:	BIT_VECTOR
Option C:	INTEGER

Option D:	REAL
Q14.	Find the complement of the expression A'B + CD'
Option A:	(A' + B)(C' + D)
Option B:	(A + B')(C' + D)
Option C:	(A' + B)(C' + D)
Option D:	(A + B')(C + D')
Q15.	Which of the following is the Binary equivalent of Hexadecimal F.
Option A:	1011
Option B:	1100
Option C:	1111
Option D:	1110
Q16.	Simplified equation of CARRY of full adder having 3 inputs A,B,C will be
Option A:	AB+AC+BC
Option B:	AB+AC
Option C:	AC+BC
Option D:	A+B+C
Q17.	A for loop is initiated as given below, in total how many iterations will be there for the FOR loop? FOR i IN 0 TO 4 LOOP
Option A:	3
Option B:	4
Option C:	5
Option D:	6
Q18.	Reduced the equation (A + B)(A + C)
Option A:	AB + BC
Option B:	A + BC
Option C:	A'B + AB'C
Option D:	(A + C)B
Q19.	Which of the following is not a octal number?
Option A:	27
Option B:	89
Option C:	11
Option D:	35
Q20.	A 2 bits full adder consist of
Option A:	4 Combinational inputs
Option B:	8 Combinational inputs
Option C:	16 Combinational inputs
Option D:	32 Combinational inputs
Q21.	What does the EXIT statement in a loop?
Option A:	For ending the loop

Option B:	For skipping one execution
Option C:	For repeating one statement in the loop
Option D:	For ending the condition and creating infinite loop
Q22.	Which is the correct binary code for Gray Code (11111)
Option A:	10100
Option B:	11110
Option C:	11000
Option D:	10101
Q23.	Convert $(21.65)_{10}$ to binary number system.
Option A:	$(10101.10100)_2$
Option B:	$(10001.110011)_2$
Option C:	$(11101.1111)_2$
Option D:	$(10100)_2$
Q24.	In truth table of D flip-flop, if Input is 0 then output will be___
Option A:	1
Option B:	0
Option C:	Set
Option D:	Reset
Q25.	Calculate the binary Subtraction using 1's complement method. $(1001)_2 - (0110)_2$
Option A:	$-(0111)_2$
Option B:	$+(0011)_2$
Option C:	$-(0011)_2$
Option D:	$+(0111)_2$