

University of Mumbai

Examination 2020 under cluster 4 (PCE)

Program: BE Electronics and Telecommunications Engineering

Curriculum Scheme: Rev2012

Examination: Third Year Semester V

Course Code: **ETC501** and Course Name: **Microcontroller & Applications**

Time: 1 hour

Max. Marks: 50

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

Q1.	In LCD, which hex command performs the function of 'Display on, cursor on and blinking'?
Option A:	0x0A
Option B:	0x0C
Option C:	0x0E
Option D:	0x0F
Q2.	In LCD, which function is executed by '0x05' hex command
Option A:	Shift display left
Option B:	Shift display right
Option C:	Clear display
Option D:	Return cursor to home
Q3.	What is the possible range of current limiting resistor essential for lightening the LED in certain applications after pressing the push-button?
Option A:	25- 55 Ω
Option B:	55-110 Ω
Option C:	110-220 Ω
Option D:	220- 330 Ω
Q4.	SWP R12, R10, [R9] perform _____.
Option A:	R12 <-- [R9], [R9]<-- R10
Option B:	R10 <-- [R9], [R9]<-- R12
Option C:	R9 <-- [R12], [R9]<-- R10
Option D:	R12 <-- [R9], [R9]<-- R10
Q5.	Embedded System that are designed using 8-bit microcontrollers or 16-bit microcontrollers are called as _____
Option A:	Small scale embedded system
Option B:	Medium scale embedded system
Option C:	Sophisticated embedded system
Option D:	Complex Embedded system
Q6.	EQU Directive in assemble level language _____.
Option A:	Give a symbol name to a register
Option B:	Give a symbol name to a numeric constant.
Option C:	Give a symbol name to a Memory location.
Option D:	Make a new block of data or code.

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Q7.	The device that generates the basic timing clock signal for the operation of the circuit is in crystal oscillator is
Option A:	Clock Generator
Option B:	Timing & control unit
Option C:	Oscillator
Option D:	timing unit
Q8.	The register that can be used as scratch pad is :
Option A:	Data Register
Option B:	Accumulator & B Register
Option C:	Accumulator
Option D:	B register
Q9.	Special purpose register in 8051 Microcontroller are _____ register
Option A:	32 bits
Option B:	16 bits
Option C:	64 bits
Option D:	8 bits
Q10.	The 8051 has _____ 16 bits counters
Option A:	4
Option B:	3
Option C:	2
Option D:	1
Q11.	The register that can provide control and status information about serial port is
Option A:	IE
Option B:	TSCOM
Option C:	PCON and SCON
Option D:	IP
Q12.	How are the bits of register PSW affected if we select Bank 3 of 8051 Microcontroller
Option A:	PSW.3 = 1 and PSW.4=1
Option B:	PSW.3 = 1 and PSW.4=0
Option C:	PSW.3 = 0 and PSW.4=1
Option D:	PSW.3 = 0 and PSW.4=0
Q13.	DEC instruction are invalid for
Option A:	DPTR
Option B:	A
Option C:	Rn
Option D:	direct memory address
Q14.	In 8051 MUL instruction for two 8-bit numbers, stores the result in?
Option A:	R1 & R2
Option B:	Specified address

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Option C:	Stack
Option D:	A & B
Q15.	Which instruction switches on Timer 0?
Option A:	SETB TR0
Option B:	MOV TMOD,#01H
Option C:	MOV TMOD,10H
Option D:	SET TR0
Q16.	Select the code to push R5 and A onto the stack .
Option A:	PUSH R5 PUSH A
Option B:	PUSH #R5 PUSH A
Option C:	PUSH R5 PUSH 0F0H
Option D:	PUSH 05 PUSH 0E0H
Q17.	How many data lines are there in a 16*2 alphanumeric LCD?
Option A:	16
Option B:	8
Option C:	1
Option D:	4
Q18.	Why do we need a ULN2803 in driving a relay
Option A:	for switching a motor
Option B:	for increasing the current limit in the relays
Option C:	for increasing the power
Option D:	for decreasing the current limit in the relays
Q19.	8 input DAC has _____
Option A:	8 discrete voltage levels
Option B:	64 discrete voltage levels
Option C:	124 discrete voltage levels
Option D:	256 discrete voltage levels
Q20.	Which is the property of RISC architecture?
Option A:	single cycle execution of most of the instructions.
Option B:	Complex Addressing Modes.
Option C:	size of all instructions is not same.
Option D:	It has a microprogramming unit.
Q21.	In ARM 7, length of every instruction is _____ bit.
Option A:	8
Option B:	16
Option C:	32
Option D:	64

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Q22.	SPSR register is accessible in all modes except _____ mode.
Option A:	FIQ
Option B:	IRQ
Option C:	Abort
Option D:	User
Q23.	In vehicle airbag, _____ series processors are used.
Option A:	Cortex-A
Option B:	Cortex-R
Option C:	Cortex-M
Option D:	Cortex-B
Q24.	If r2 contains 8 then after execution of ADD r3,r2,r2,LSL#3 , r3 will hold
Option A:	84H
Option B:	28H
Option C:	82H
Option D:	48H
Q25.	In 3-address format of ARM instructions we have _____.
Option A:	2 source operands and 1 destination register
Option B:	1 source operand and 2 destination registers
Option C:	Both the ways are possible.
Option D:	All three are destination operands.

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Question	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	D
Q2.	B
Q3.	D
Q4	D
Q5	A
Q6	B
Q7	C
Q8.	D
Q9.	B
Q10.	C
Q11.	C
Q12.	B
Q13.	A
Q14.	D
Q15.	A
Q16.	D
Q17.	B
Q18.	B
Q19.	D
Q20.	A
Q21.	C
Q22.	D
Q23.	B
Q24.	D
Q25.	A