

Program: BE Biomedical Engineering

Curriculum Scheme: Revised 2016

Examination: Third Year Semester VI

Course Code: BMC602 and Course Name: Microprocessors and Microcontrollers

Time: 1 hour

Max. Marks: 50

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

Q1.	A "mnemonic" is
Option A:	A comment
Option B:	An operand
Option C:	A label
Option D:	A command to the CPU
Q2.	A high-level language program is converted to machine language by
Option A:	Assembler
Option B:	Compiler
Option C:	Editor
Option D:	Debugger
Q3.	How many clock cycles make each Bus cycle in 8086?
Option A:	3
Option B:	4
Option C:	6
Option D:	8
Q4.	The Maximum size of a single continuous segment with reference to 8086 memory segmentation is
Option A:	64KB
Option B:	32KB
Option C:	16KB
Option D:	512KB
Q5.	How many maximum interrupting devices can be connected through 8259 in Master-Slave mode?
Option A:	64
Option B:	8
Option C:	128
Option D:	32
Q6.	How many addresses 8255 will have when used in a microprocessor or

	microcontroller-based system?
Option A:	4
Option B:	2
Option C:	6
Option D:	8
Q7.	FIFO sensor RAM in 8279 is of how many bytes
Option A:	8
Option B:	6
Option C:	16
Option D:	4
Q8.	Every DMA cycle in 8237 is of how many clock cycles?
Option A:	6
Option B:	4
Option C:	3
Option D:	8
Q9.	The number of 8-bit input/output ports in 8051 is
Option A:	8
Option B:	4
Option C:	2
Option D:	1
Q10.	If the 8051 Flag register PSW.1 bit is
Option A:	Carry flag
Option B:	Auxiliary carry
Option C:	User defined flag
Option D:	Register bank select bit 1
Q11.	Which of the following 8051 family members has 0 Kbyte of on chip ROM?
Option A:	8031
Option B:	8051
Option C:	8052
Option D:	8751
Q12.	When M1 and M0 bits of TMOD register are both 1s, the 8051 timer operates in
Option A:	Split timer mode
Option B:	13-bit timer mode
Option C:	8-bit auto reload mode
Option D:	16-bit timer mode
Q13.	In 8051 interrupt vector address for INT0 is
Option A:	0000H
Option B:	0003H
Option C:	0013H

Option D:	0023H
Q14.	8051 Instruction "JC label " is a
Option A:	Jump instruction
Option B:	Call instruction
Option C:	Arithmetic instruction
Option D:	Logical instruction
Q15.	An alternative instruction for "CLR C" is
Option A:	CLR PSW.0
Option B:	CLR PSW.7
Option C:	CLR PSW.2
Option D:	CLR PSW.5
Q16.	What is the time taken by one machine cycle if crystal frequency of a 8051-based system is 11.0592 MHz?
Option A:	1.085 μ s
Option B:	5.66 μ s
Option C:	3.75 μ s
Option D:	2.55 μ s
Q17.	Which of the following is not a "C" data type for 8051?
Option A:	Unsigned char
Option B:	Signed char
Option C:	Unsigned int
Option D:	Double
Q18.	Which bit of 8051 TCON register must be set in order to start the 'Timer 0' while operating in 'Mode 0'?
Option A:	TR0
Option B:	TF0
Option C:	IT0
Option D:	IE0
Q19.	If TMOD register of 8051 contains a value 12H, which mode and which timer are selected?
Option A:	Mode 2 of timer 0, and Mode 1 of timer 1
Option B:	Mode 0 timer 0, Mode 0 timer 1
Option C:	Mode 1 timer 0, Mode 1 timer 1
Option D:	Mode 2 timer 0, Mode 2 timer 1
Q20.	What will be the contents of register A after following instructions are executed: CLR C MOV A, #4DH SWAP A RRC A

Option A:	5FH
Option B:	78H
Option C:	6AH
Option D:	FFH
Q21.	How many address lines are required for accessing the data in a 1,024 bytes RAM memory chip, while data is organized as bytes?
Option A:	7
Option B:	8
Option C:	15
Option D:	10
Q22.	How many data pins are there in a 16×2 alphanumeric LCD?
Option A:	1
Option B:	2
Option C:	8
Option D:	32
Q23.	The rows and columns of a 4×4 matrix keyboard are connected respectively to the lower half of P1(output port) and the lower half of P2(input port) of 8051 microcontroller. If no key has been pressed, reading P2 will yield which of the following binary values in its lower half?
Option A:	1111
Option B:	1001
Option C:	1100
Option D:	1010
Q24.	How many pins for ground are available in ADC0804?
Option A:	1
Option B:	2
Option C:	3
Option D:	4
Q25.	If 8051 microcontroller is interfaced with DAC0808, which of the waveforms given in the options below will be obtained for the following program: MOV A, #00H MOV P1, A BACK: INC A SJMP BACK
Option A:	Square waveform
Option B:	Saw tooth waveform
Option C:	Sine waveform
Option D:	ECG waveform

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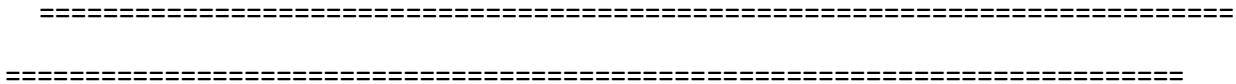
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Question	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	D
Q2.	B
Q3.	B
Q4	A
Q5	A
Q6	A
Q7	A
Q8.	B
Q9.	B
Q10.	C
Q11.	A
Q12.	A
Q13.	B
Q14.	A
Q15.	B
Q16.	A

Q17.	D
Q18.	A
Q19.	A
Q20.	C
Q21.	D
Q22.	C
Q23.	A
Q24.	B
Q25.	B