

CONTINUOUS INTERNAL EVALUATION - 1

Dept:EC	Sem / Div:4 th	Sub:Microcontroller	S Code:18EC46
Date:6/7/22	Time: 3:00-4:30 pm	Max Marks: 50	Elective:N

Note: Answer any 2 full questions, choosing one full question from each part.

QN	Questions	Marks	RBT	CO's
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PART A

1	a With a block diagram explain the architecture of 8051 Microcontroller b Explain when overflow, auxiliary and parity flag bit in 8051 PSW is set. What will be the value in the PSW register after the execution of the following instructions MOV A,#40H MOV B,#3FH ADD A, B c With diagram explain the structure of RAM	10	L2	CO1
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OR

2	a Interface 8051 microcontroller with 4KB of ROM and 64KB RAM b Explain port 0 pin configuration c What is a stack. Explain the stack operation	10	L2	CO1
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PART B

3	a What is an addressing mode? Explain the different types of addressing modes with two examples for each b Explain the operation of the following instructions and write the output after the execution of the following	8	L2	CO2
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instructions (assume A=23H, C=0, R0=30H, B=45H,
 SP=07H, Data at address 30H=55H
 i) RLC A ii) XCHD A,@R0 iii) PUSH 30H iv) XRL A,B
 v) DIV AB

c Write assembly level program to perform the following operation. Write the output after execution
 i) ADD two numbers A=50h and B=38h. Store the output in location 30H
 ii) Multiply two numbers stored in the location 20H =5H and 21H=12H. Store the output in location 23h

7 L3 CO2

OR

4 a Explain conditional and unconditional jump instruction with two examples each 8 L2 CO2

b Check if the instructions given are valid or not. Write the reason and correct the invalid instruction 10 L2 CO2

- i) MOV 50H,#50H
- ii) MOV R0,DPTR
- iii) DEC DPTR
- iv) MOV R5,@R0
- v) MOV A,@R7
- vi) MOV #20H,20H
- vii) MOV 30H,50H

c Write assembly level program to perform the following operation. Show the output after execution 7 L3 CO2

- i) Subtract B=30h from A=50h. Store the output in location 30H
- ii) Divide the number stored in the location 20H=25H by 21H=7H. Store the output in location 23h

Prepared by: Rajani Rai

Rajani

(8 - ha)
HOD