

**PARUL UNIVERSITY**  
**FACULTY OF ENGINEERING & TECHNOLOGY**  
**B.Tech Mid Semester Exam**

Semester: 4th

Subject Code: (303113257)

Subject Name: (Micro-controller Interfacing)

Date: (02/02/2024)

Time: (1hr: 30min)

Total Marks: 40

Sr. No.		Marks
Q.1	(A)	05
	1. 8051 micro-controllers are manufactured by which of the following companies? a) Atmel            b) Philips            c) Intel            d) All of the mentioned	
	2. How many bytes of bit addressable memory is present in 8051 based micro-controllers? a) 8 bytes            b) 32 bytes            c) 16 bytes            d) 128 bytes	
	3. Which instruction is used to check the status of a single bit? a) MOV A,P0    b) ADD A,#05H    c) JNB PO.0, label    d) CLR P0.05H	
	4. Which instructions have no effect on the flags of PSW? a) ANL            b) ORL            c) XRL            d) ALL OF THE MENTIONED	
	5. 8051 has .....no. of I/O pins a) 8            b) 16            c) 32            d) 24	
	(B)	05
	1. The Stack pointer (SP) register is of _____ bits. 8/16/12/04	
	2. The 8051 has _____ no. of I/O (GPIO) port. 01/02/08/04	
	3. Microprocessor normally less expensive than Microcontrollers? True/False	
	4. Give name of software in which 8051 program is compiling. Keil /8085 simulator	
	5. Which extension of file supported by 8051 controllers. hex/ c file / asm	
Q.2	Attempt any four(Short Questions)	12
	(1) Explain (i) ALU (ii) Instruction decoder.	
	(2) Discuss Flag register of 8051 Micro-controller with function of each flag bit.	
	(3) Discuss Function of 8051 instructions: 1. DAA 2. CPL 3. CJNE 4. SWAP	
	(4) Explain the memory structure of 8051.	
	(5) List the features of 8051 mc?	

- Q.3 Attempt any two questions 08  
(1) List out all special function register in 8051 & explain each SFR primary function.  
(2) Write an 8051 Program C program to Send values 00H -- FFH to port P1.  
(3) Describe the pin configuration of 8051?
- Q.4 (A) Differentiate 1.LCALL And ACALL 2.LJMP and SJMP 05  
(B) Discuss various Assembler Directives of 8051 micro-controller. 05
- OR
- (B) Write an 8051 C program to get a Byte of data from P1, wait  $\frac{1}{2}$  second and then send to P2. 05