



Roll No.

**PRESIDENCY UNIVERSITY  
BENGALURU**

**SCHOOL OF ENGINEERING**

**TEST - 1**

**Even Semester:** 2018-19

**Course Code:** ECE 218

**Course Name:** Microcontroller Application

**Programme & Sem:** B.Tech (ECE) & VI Sem

**Date:** 05 March 2019

**Time:** 1 Hour

**Max Marks:** 40

**Weightage:** 20%

**Instructions:**

- (i) **Write legibly**
- (ii) **Scientific and non programmable calculators are permitted**

**Part A**

Answer **all** the Questions. **Each** question carries **four** marks. (4Qx4M=16)

1. Which of the following is illegal?  
a) MOV A, #500    b) ADD A, #F5H    c) MOV R9, #50H    d) ADD R3, A
2. Explain 8051 ports and their functions?
3. What will be the content of A and B after the execution of following instructions?  
MOV 0F0H, #12H  
MOV R0, #0F0H  
MOV A, #34H  
XCH A, 0F0H
4. Explain the PSW register of 8051?

**Part B**

Answer **both** the Questions. **Each** question carries **six** marks. (2Qx6M=12)

5. Explain the difference between Micro Controller and Microprocessor with neat diagram.
6. Write a program to copy 10 byte of data from RAM location starting at 35H to RAM location 60H. Identify the addressing modes used.

**Part C**

Answer the Question. Question carry **twelve** marks (1Qx12M=12)

7. Discuss the memory organization of 89C51 microcontroller.





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**TEST - 2**

**Even Semester:** 2018-19

**Course Code:** ECE 218

**Course Name:** Microcontroller Applications

**Program & Sem:** B.Tech & VI Sem

**Date:** 15 April 2019

**Time:** 1 Hour

**Max Marks:** 40

**Weightage:** 20%

**Instructions:**

- (i) **Write legibly**
- (ii) **Assume Suitable data if necessary**

**Part A**

Answer **all** the Questions. **Each** question carries **four** marks. (4Qx4M=16)

1. What is the function of Chip MAX232?
2. Explain the TI and RI bit of SCON register under what condition they are raised?
3. Write the instruction for IE Register to
  - a) enable the serial interrupt ,timer0 interrupt and external hardware interrupt
  - b) and disable timer0 interrupt
4. Explain Interrupt and polling with example?

**Part B**

Answer **both** the Questions. **Each** question carries **six** marks. (2Qx6M=12)

5. Write a program to transfer the numbers 1 to 9 serially at P0.1
6. Find the frequency of square wave generated on p1.3 Assume XTal=11.0592MHz

```
MOV    TMOD,#2H    ;Timer 0,mode 2
MOV    TH0,#0
AGAIN:MOV    R5,#250    ;count 250 times
ACALL  DELAY
CPL    P1.3
SJMP  AGAIN
-----
DELAY:SETB  TR0      ;start
BACK: JNB   TF0,BACK
CLR    TR0          ;stop
CLR    TF0          ;clear TF
DJNZ  R5,DELAY    ;timer 2: auto-reload
RET
```

### Part C

Answer the Question. The Question carries **twelve** marks.

(1Qx12M=12)

7. Generate the following waveform on p1.2 with Xtal=22MHz.

