**Name: …………………………………………………………………… Class ID: ………………….**

**Email ID: ………………………………………………………………. Mobile: …….……………..**

1. What is F\_CPU? What is the relation between F\_CPU and crystal? What will happen if we define wrong F\_CPU?
2. Draw a circuit diagram for a 5 volt fixed power supply.
3. Write a program to declare PA4 as input and PB2 as output.
4. An LED is connected to PB2. Write a program to blink the LED in every 5 seconds.
5. What is external interrupt? Why we use it?
6. INT0 pin is connected to a switch that is normally high. Write a program that toggles PORTC whenever INT0 pin goes low.
7. What is ADC, Why we use it, calculate the precision of a 10bit ADC when Vref = 5volt?
8. What is EEPROM and for what purpose we use them?
9. What is PWM? What is the application of PWM? How can we control DC Motor speed using PWM?
10. What is Timer and prescaler and for what purpose we use them?
11. What is the difference between timer Overflow Interrupt mode and Compare Match (CTC) Interrupt mode?
12. Can we communicate with PC using AVR uC if yes, then how? What is baudrate and where we have used it?
13. Write some project ideas that we can make using uC.