

IIIT VADODARA
CS/IT 429 EMBEDDED SYSTEM
LAB EXAM

Time: 9:00 AM to 11:00 AM (2 Hr)

Marks : 50

- 1 Write an AT89C51 based Embedded C code to generate the square wave of the 1 KHz at port pin P2.0 using timer interrupt. Also incorporate the GATE control to ON/OFF the square wave output. Use Timer 1 in Mode 1 and XTAL= 11.0592 MHz. Perform the experiment using **Keil IDE (To be attempted by students having odd Roll numbers)**
- 2 Write a embedded C code to read two different slide switches connected at digital IO pin of Arduino UNO board and display the respective HEX number of switch on 7-Segment LED connected with I/O pin of Arduino UNO board. Interface switch with PULL_UP configuration. Perform the experiment using **Tinkercad. (To be attempted by students having even Roll numbers)**

SW1	SW2	Number to be Display on 7-segment
0	0	0
0	1	1
1	0	2
1	1	4

Note.

- (1) Students are informed to upload the scanned answer sheet as single PDF by **11:20 AM.** . The name of the PDF must be roll_no.PDF i.e if your roll no is20205xxxx then the PDF file must be saved as20205xxxx.pdf.
- (2) PDF must contain the following thing with given Sequence
 - (i) Aim
 - (ii) Flow Chat/ Algorithm
 - (iii) Theory / Calculation
 - (iv) Interfacing Circuit
 - (v) Code
 - (vi) Result (screen shot)
 - (vii) Conclusion
- (3) If any Student fails to follow above mention sequence or miss any point from above mention point then he/she may have to pay some penalty in terms of mark.