KLS Gogte Institute of Technology, Belagavi

Department of Computer Science & Engineering **Academic Year: 2020-21 (EVEN SEM)**

Program: B.E (Computer Science & Engineering) **Semester:** VI

IA Test – I

Course Title: Embedded Systems and IoT **Code:** 18CS63

Max. Marks: 25 (**Part B: 25 Marks)** **Duration:** 1 Hr. 15 Mins. **Date:** 01/06/2021

Instructions:
1. Part B: Answer any five full questions.
2. Assume any missing data suitably.
3.

Q. No.	PART B	[L]	[CO]	[PO]	[M]
1.	Define Embedded System. List and explain the characteristics of Embedded Computing Applications.	1,2	1	1	5
2.	Explain with a neat diagram the sample requirement form.	2	1	1	5
3.	Calculate the machine cycle frequency and time period for the XTAL frequency given below: a) 11.0592 MHz b) 22 MHz	3	2	1,2	5
4.	Develop an 8051 'C' program to toggle bits of port P1continuously with a delay of 250ms.	3	2	1,2	5
5.	Write an 8051 C program to toggle all the bits of P0 and P2 continuously with a 100ms delay. Use the inverting and Ex-OR operators, respectively.	3	2	1,2	5
6.	A door sensor is connected to the P1.1 pin, and a buzzer is connected to P1.7. Develop an 8051 'C' program to monitor the door sensor, and when it opens, sound the buzzer. You can sound the buzzer by sending a square wave of a few hundred Hz.	3	2	1,2	5
7.	Develop an 8051 'C' program to convert packed BCD 0x47 to ASCII and display the bytes on P1 and P2.	3	2	1,2	5

Note: L (Level), CO (Course Outcome), PO (Programme Outcome), M (Marks)