VIT®

Vellore Institute of Technology

(Deemed to be University under section 3 of UGC Act, 1956)

School of Computer Science and Engineering

Winter Semester 2023-2024Continuous Assessment Test – I

Program Name &Branch: BCB, BCE, BCI, BCT, BDS, BKT **SLOT: A1+TA1**

Course Name & code: Embedded system BCSE305L

Date of exam: 11/02/2024

Class Number (s):
VL2023240501048,1023,1030,1060,1039,1064,1084,1095,1087,1013,1052,1017,1093,1059,1085,1069,1019

Exam Duration: 90 Min. **Maximum Marks: 50**

General instruction(s):

Answer all five questions.

	Question	Max Marks
1.	Draw and explain the internal block diagram of PIC and mention the difference between microprocessor and microcontroller.	10
2	Develop the embedded system design process for GPS moving map?	10
3	Write a program using 8051 to generate square wave of 1 kHz at pin P1.0? (Note- crystal frequency -11.0592 MHz, Machine cycle-12, using timer 1 mode 2)	10
4	Draw and explain the working principle of analog to digital converter along with its characteristic?	10
5.	Explain the interfacing of ultrasonic sensor with 8051 for object detection?	10

MAT - CAT1

BCSE305L - Embedded systems.

1) PIC Architecture & Explanation - 7M

Differences between MP & MC - 3M

2) GPS specifications
requirements
Transmitter & Receiver
Explanation
} 10M

3) Timer Mode register - 2M
count - 3M
Program - 5M

4) ADC Diagram & Explanation - 7M
Characteristics - 3M

5) Interfacing of 8051 with Sensor - 5M
Explanation - 5M