



VIT[®]

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

School of Computer Science and Engineering

Winter Semester 2023-2024 Continuous 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 |