**Reg.** No:

Time: 3 hours

i) Cross-assembler

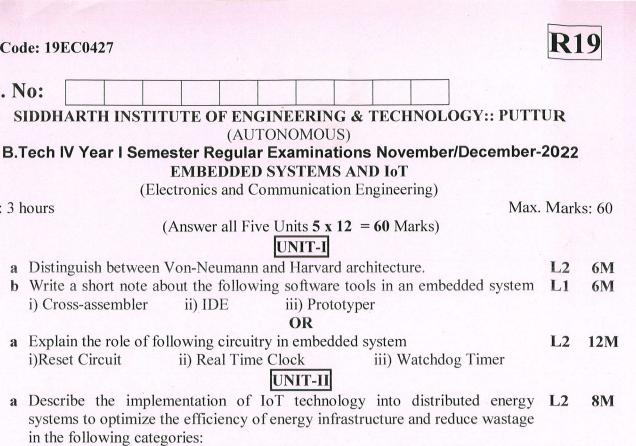
in the following categories:

i)Reset Circuit

1

2

3



(i)Smart grids	(ii) Renewable energy systems	(iii)Prognostics	
(I)smart grius	(II) Renewable energy systems	(III)I Tognostics	

ii) IDE

- b Describe the implementation of IoT technology in Health and life style as L2 4Mhealth and fitness monitoring
  - OR
- a With the help of following sectors explain how IoT technology is impacting L2 4 **6M** on the agriculture sector: (i) Smart Irrigation (ii) Green house control **b** With a neat sketch, explain the Logical Design of an IoT. L3 **6M**

## UNIT-III

- With the help of neat diagrams, explain the M2M system architecture. 5 L2**12M** OR
- **a** Write a program to perform ADC with the sensor inputs 6 L3 **6M b** What is Arduino and list its advantages? L2 **6M**

## **UNIT-IV**

- a Explain the following data types and data structures of python with an 7 **8**M L2 example. i) Numbers ii) Strings iii)Tuples iv)Dictionaries
  - **b** Explain Functions and Modules in python with an example. L2 4MOR
- a Explain the characteristics of Python programming language L2 **6M** 8 **b** Write a short on various service types used in service specifications step of L2 **6M** 
  - IoT System design methodology.

## **UNIT-V**

a Describe the various features of a Raspberry Pi board. 9 L2 **6M b** Explain the GPIO pins of Raspberry Pi device with neat diagram. L2 **6M** 

## OR

- 10 Design and Development of an automatic refrigerator light system with LED, L3 **12M** switch & raspberry pi and write a python program to support the working of that design.
  - \*\*\* END \*\*\*

