R15

Code: 15A04702

B.Tech IV Year II Semester (R15) Advanced Supplementary Examinations July 2019
EMBEDDED SYSTEMS
(Electrical and Electronics Engineering)

Time: 3 hours   Max. Marks: 70

PART – A
(Compulsory Question)
*****

1   Answer the following: (10 X 02 = 20 Marks)
   (a)   What are host and target machines?
   (b)   Mention four applications of embedded systems
   (c)   Draw the block diagram of TM4C microcontroller.
   (d)   Write any four differences between CISC and RISC.
   (e)   What are the functions of timer module in embedded systems?
   (f)   Explain about counter devices in embedded systems.
   (g)   What are the features of real time clock?
   (h)   What are interrupts?
   (i)   What are the blocks present in embedded Wi-Fi?
   (j)   Write the advantages and disadvantages of I2C protocol.

PART – B
(Answer all five units, 5 X 10 = 50 Marks)
UNIT – I

2   Explain in detail about various types of embedded processors.
OR
3   Explain various hardware and software design process of embedded systems.
UNIT – II

4   Explain the addressing modes of TM4C.
OR
5   Explain the architecture of cortex M series microcontrollers.
UNIT – III

6   Explain various factors considered for selection of processor for an embedded system.
OR
7   Explain various memories and I/O devices used in embedded systems.
UNIT – IV

8   Draw the block diagram of hibernation module and explain.
OR
9   Draw the block diagram of Quadrature Encoder interface (QEI) and explain the functions of each block.
UNIT – V

10   Explain the working of SPI communication protocol.
OR
11   Draw the block diagram and explain the architecture of IOT.

*****

FIR FirstRanker.com
Firstranker's choice
www.FirstRanker.com