M. Tech. –III (Computer Engineering) (CBCS – 2015 Course) :
WINTER - 2018

SUBJECT : SELF – STUDY PAPER – I: SENSOR NETWORK AND EMBEDDED SYSTEMS

W-2018-3194

Day : Saturday
Date : 08/12/2018

Time : 11.00 AM TO 02.00 PM
Max. Marks : 60

N. B. :

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Answers to both the sections should be written in **SEPARATE** answer books.
4) Draw neat and labelled diagram **WHEREVER** necessary.
5) Assume suitable data, if necessary.

SECTION – I

Q. 1 Explain operating system and execution environments with example. **(10)**

OR

Enlist and explain challenges of WSN. **(10)**

Q. 2 Explain various MAC protocols for WSN. Elaborate the functions of these protocols. **(10)**

OR

Explain how address and name management is done in WSN. **(10)**

Q. 3 Explain state-centric programming for WSN. **(10)**

OR

Explain what is mean by topology control and clustering. **(10)**

SECTION – II

Q. 4 Explain the complete design of Model Train Controller. **(10)**

OR

Explain embedded system design process. **(10)**

Q. 5 Explain processor and memory organization of ARM processor. **(10)**

OR

Explain the following: **(10)**

a) ARM Bus
b) SHARC Bus
c) CPU Bus

Q. 6 What is CAN Bus and Myrinet? **(10)**

OR

How Java can be effectively used in developing embedded system applications? **(10)**

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