Enrollment No: _____ Exam Seat No:_____

C.U.SHAH UNIVERSITY

Summer Examination-2017

Subject Name: Wireless Technology for Embedded System

Subject Code: 5TE02WTE1 Branch: M.Tech (VESD)

Semester: 2 Date: 09/05/2017 Time: 02:00 to 05:00 Marks: 70

Instructions:

(1) Use of Programmable calculator and any other electronic instrument is prohibited.
(2) Instructions written on main answer book are strictly to be obeyed.
(3) Draw neat diagrams and figures (if necessary) at right places.
(4) Assume suitable data if needed.

SECTION – I

Q-1 **Define the following terms.** **(07)**

a. TDD
b. Node
c. Path loss
d. Sensor
e. Symbol Rate
f. Data Rate
g. BER

Q-2 **Attempt all questions.** **(14)**

(a) Explain Sensors and its types.
(b) What is Aggregation? Explain in detail.

OR

Q-2 **Attempt all questions.** **(14)**

(a) Compare FPGAs, and ASICs.
(b) Write a short note on CDMA.

Q-3 **Attempt all questions.** **(14)**

(a) Explain Challenges for WSNs.
(b) Explain Transceiver tasks and characteristics in detail.

OR

Q-3 **Attempt all questions.** **(14)**

(a) Explain the need of Wireless Technology for Embedded System.
(b) Write a note on Event-based programming model of WSN.

SECTION – II

Q-4 **Define the following terms.** **(07)**

a. FDD
b. Doppler fading
c. Embedded System
d. Multi-hop communication
e. Transceivers
f. Reflection
g. Diffraction

Q-5 **Attempt all questions.** **(14)**

(a) Give the Overview of main sensor node hardware components.
(b) What is Gateway? Explain the need for gateways in WSN.

OR

Q-5 **Attempt all questions.** **(14)**

(a) Compare Single-hop versus Multi-hop networks in detail.
(b) Explain Hidden-terminal scenario with necessary figure.

Q-6 **Attempt all questions.** **(14)**

(a) Explain log-distance path loss model with necessary equation.
(b) Discuss the properties of localization and positioning procedures.

OR

Q-6 **Write notes on:** **(14)**

(a) Demand assignment protocols.
(b) Lightweight time synchronization protocol (LTS).