- 4 DEC 2019

B.E/(ExTC) Sem 8 /CBSGS .

(3 Hours)

[Total Marks - 80]

N.B i) Question no.**1** is compulsory

ii) Solve any **three** from the remaining **five** questions

1 a. Explain the 'Zone planning' concept for the Indoor radio planning. 5

b. What is the pole capacity of the cell ? 5

c. Discuss the Advanced Antenna systems used in HSPA and LTE. 5

d. With a suitable example explain category 1 and category 2 of sensor network 5

2 a.] 'CDMA is interference limited system'.Justify and explain the need for 10
power control.

b. Give the detailed radio access network overview. Explain in detail functions 10
of Node B and RNC also draw UTRAN logical architecture.

3 a. Explain Bluetooth security features and security levels with proper diagram 10

b. Elaborate on Zigbee components , topologies and protocol stack. 10

4 a. Explain the relevance of CSMA/CA technique in WLAN and the concept of 10
Hidden Node and Exposed Node.

b. There are various resource constraints in the design and implementation of 10
WSN . Justify.

5 a. How does a typical RFID system work ? Discuss its components and 10
list its applications.

b. Why TCP and UDP protocols are unsuitable for implementation in WSN. 10

6 Write notes on [any two] 20

a. Middleware architecture of WSN

b. UWB technology

c. Routing challenges in WSN

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