Engg. - 48

T.E. (Computer Engineering) (Semester - I)

DATA COMMUNICATION AND WIRELESS SENSOR NETWORK (In Sem.)

(2012 Pattern)

Time : 1 Hour]   *[Max. Marks : 30*

Instructions to the candidates:

    1)   *Answer any three questions.*

    2)   *Solve Q-1 or Q-2, Q-3 or Q-4, Q-5 or Q-6.*

    3)   *Neat diagrams must be drawn wherever necessary.*

    4)   *Assume Suitable data if necessary.*

Q1) a) What is block coding explain any one method in detail.   **[5]**

     b) Explain wireless router, Access points, switches and hubs.   **[2]**

     c) What is VPN? What are applications of VPN?   **[3]**

<p align="center">OR</p>

Q2) a) Represent 1100100111 using following line coding schemes.   **[6]**

        i)   AMI

        ii) Manchester code

        iii) Polar NRZ

     b) With the help of waveform explain sampling, quantization and encoding.   **[4]**

Q3) a) "In Go-Back-N ARQ, the size of the send window must be less than 2^m", with the help of flow diagram justify the statement?   **[5]**

     b) What is FHSS? Explain with diagram.   **[5]**

<p align="center">OR</p>

Q4) a) Draw an explain block diagram of Direct Sequence Spread Spectrum. **[5]**

     b) Compare packet switching and circuit switching.   **[5]**

P.T.O.

Q5) a) Draw and explain components of wireless sensor network. **[5]**

b) Draw block diagram for RFID reader and RFID tag. **[3]**

c) What are the advantages of RFID over bar code? **[2]**

OR

Q6) a) Write and explain characteristics of wireless sensor network. **[4]**

b) Define sensor network. Draw basic architecture of it and list its applications. **[4]**

c) What is an importance of sensors in robots? **[2]**

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